

**ENVIRONMENTAL ASSESSMENT AND FINDING OF NO  
SIGNIFICANT IMPACT**

**CANTONMENT FACILITIES IMPROVEMENT PROGRAM AT  
POHAKULOA TRAINING AREA, HAWAII ISLAND, HAWAII**

**OCTOBER 2018**



**Prepared By: U.S. Army Corps of Engineers, Honolulu District**

**Prepared For: U.S. Army Garrison, Hawaii**

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**Finding of No Significant Impact**  
**Cantonment Facilities Improvement Program at**  
**Pohakuloa Training Area, Hawaii**

AUTHORITY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321-4347) (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR parts 1500-1508), and the Final Rule on Environmental Analysis of Army Actions (32 CFR Part 651), the United States Army Garrison, Hawai'i (USAG-HI) gives notice that an Environmental Assessment (EA) has been prepared for a Facilities Improvement Program (FIP) at the Pohakuloa Training Area (PTA), Hawaii Island, Hawaii. This EA is incorporated by reference in this Finding of No Significant Impact.

PROPOSED ACTION: USAG-HI proposes to modernize building and utility infrastructure within an 80-acre portion of the PTA cantonment to meet current building codes and improve safety and quality of life for Army and other personnel stationed and training at PTA. The U.S. Army originally constructed the cantonment in the 1950s, and it has remained largely unchanged, except for modifications in the late 1990s to accommodate the State's realignment of Saddle Road, now known as the Daniel K. Inouye Highway, and several new buildings constructed in the early 2000s.

The preferred alternative is to implement the building components of the FIP. The preferred alternative includes replacing aging Quonset huts and other buildings in the cantonment with one-story structures of similar size. The preferred alternative would improve the quality of the facilities within the cantonment without increasing their capacity, building heights, or extending beyond the existing cantonment boundaries. The existing street pattern in the cantonment would remain unchanged, as would the general density and basic land use configuration. The end-state would provide housing and training space for a brigade minus (-) sized element, similar to what is currently provided. Drainage and utility improvements are described in the EA to provide context for FIP proposals. These drainage and utility improvements were evaluated in Records of Environmental Consideration (RECs).

The preferred alternative would be located entirely within federally-owned land and constructed in accordance with all applicable laws. The improvements would be phased over an approximately eight-year period (FY 16-23) subject to funding availability, with building components projected to begin in FY19.

ALTERNATIVES CONSIDERED: The Proposed Action and No Action alternatives were evaluated in the EA. Under the no-action alternative, the cantonment buildings would not be modernized. Cantonment buildings would continue to deteriorate, resulting in unsatisfactory living and working conditions, and ongoing and increasing maintenance costs. The no-action alternative would not meet the project purpose and need to support the mission of PTA and to provide and maintain an austere but safe training facility.

The no-action alternative maintains the status quo. Cantonment drainage and utility improvements are already approved and proceeding independent of the proposed action, hence they would still be completed under a no-action scenario. No other improvements would occur under the no-action alternative.

**SUMMARY OF FINDINGS:** The attached EA, which is incorporated by reference, evaluated the potential environmental effects of the proposed action. Based on the analysis contained in the EA, USAG-HI has determined that implementation of the preferred alternative would result in impacts that are less than significant.

The implementation of best management practices and other measures during construction would avoid and/or minimize potential impacts to traffic, biological resources, noise, soils, air quality, and hazardous substances. The preferred alternative would have long-term beneficial impacts to quality of life, public facilities, and the visual environment. The preferred alternative, when combined with past, present and reasonably foreseeable future actions, would have less than significant cumulative impact.

USAG-HI conducted informal consultation under Section 7 of the Endangered Species Act with the U.S. Fish and Wildlife Service (USFWS). In a letter dated September 28, 2016, the USFWS stated that with avoidance and minimization measures, the preferred alternative is “not likely to adversely affect” the Hawaiian goose, Hawaiian hoary bat, Hawaiian petrel, Band-rumped storm petrel, and listed plant species in the Army’s interpretive garden. The preferred alternative would have “no effect” on the Blackburn’s sphinx moth and yellow-faced bees. The project would comply with the Migratory Bird Treaty Act by pre-construction surveying for nesting House Finches. During the operational period, the preferred alternative would have no new impacts to sensitive wildlife and their habitats, since activities in the cantonment will return to their pre-construction baseline.

USAG-HI conducted consultation under Section 106 of the National Historic Preservation Act with the Hawaii State Historic Preservation Officer (SHPO) and other consulting parties. Separate consultations were conducted for archaeological resources and architectural resources. In a letter dated April 8, 2016, the SHPO concurred with USAG-HI’s determination of “no historic properties affected” for ground disturbing activities (i.e., archaeological resources at or below ground surface level). The Army found the Quonset huts to not be eligible for inclusion on the National Register of Historic Places, and in a letter dated January 18, 2018, the Keeper of the National Register agreed. The SHPO concurred with the determination of “no historic properties affected” by letter dated March 20, 2018.

The Army reviewed the preferred alternative for consistency with the Hawaii Coastal Zone Management Program (HCZMP). Construction and use of the improvements will not affect coastal uses or resources and therefore, does not require a federal consistency determination. The Army notified the HCZMP of its determination in a letter dated February 27, 2018.


**PUBLIC REVIEW:** The PTA FIP EA and draft Finding of No Significant Impact (FNSI) were made available for a 30-day public review and comment period on July 8, 2018, with the publication of a Notice of Availability (NOA) in the Hawaii Tribune-Herald and West Hawaii Today newspapers. USAG-HI issued a Media Release on July 9<sup>th</sup> as well. Front page newspaper articles describing the proposed action and public comment period were published on July 11, 2018 (Honolulu Star Advertiser) and July 13, 2018 (Hawaii Tribune Herald and West Hawaii Today). An electronic copy of the EA and Draft FNSI was made available for download at <http://www.garrison.hawaii.army.mil/NEPA/NEPA.htm> and copies were also made available for public review at the Hilo, Kailua-Kona, and Waimea public libraries, and the Hawaii State Library on Oahu.

During the 30-day public comment period, comments were received from thirty-five (35) individuals/organizations. USAG-HI fully considered all comments received. Twenty five (25)



commenters requested that an Environmental Impact Statement (EIS) be prepared for the proposed action. Twenty-four (24) commenters expressed concerns over the presence of Depleted Uranium and/or other contaminants at PTA, and its potential health effects. All comments are reproduced verbatim in the Appendix to this FNSI, along with the Army's response to comments. The response provides clarification and further explanation as needed. No substantive issues and/or changes to the EA findings or conclusions were identified through public comment.

CONCLUSION: Based on a careful review of the PTA Cantonment FIP EA and the comments received from the public, I have concluded that the proposed action, the implementation of the building components of the FIP, would not result in significant impacts to either the man-made or natural environment. Therefore, an environmental impact statement is not required and will not be prepared.



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Thomas J. Barrett  
Colonel, U.S. Army  
Commanding

5 October 2018

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[Date]

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization                          | Name/Contact                            | Date                        | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| 1   | Elected<br>Official                              | Rep. Richard Onishi<br>House District 3 | Email dated 10<br>July 2018 | I have reviewed the FSNIS summary of the environmental analysis, I support the recommendation to proceed with the preferred alternative. The preferred alternative would upgrade the aged facilities in the PTA cantonment area and significantly improve the living conditions of the personnel that train at PTA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2   | Individual<br>(resident,<br>Lanipuna<br>Gardens) | Aaron Mitchell                          | Email dated 13<br>July 2018 | I just read about the exciting plans to modernize the structures at PTA. As someone who lost his home to Tutu Pele, I am wondering if it is at all possible to salvage some buildings and maybe truck them down to Puna. Even small guard shacks can be useful for people who have lost everything.<br>Just thinking out loud that maybe our mighty armed forces can be all that they can be and come to the rescue in this, our time of need.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | The selected contractor will be responsible for managing project-related waste streams and to meet Army’s landfill diversion goals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 3   | Individual                                       | James Ozone                             | Email dated 15<br>July 2018 | Saw the article about replacing the old PTA Quonset huts in West Hawaii Today.<br>Have you guys considered selling them for scrap? First thought I had when reading the article was "wow, I could make some great Ag buildings out of that" -- while they may not meet "minimum health/safety standards", they would still be useful for livestock and ag equipment, and recycling them might be cheaper than disposing of them.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | See Response to Comment (RTC) #2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 4   | Individual                                       | Michael Reimer, Ph.D.                   | Email dated 27<br>July 2018 | <p>The environmental assessment failed to address some critical issues related to the upgrading of PTA cantonment area. It is so short on detail that I would call it “EA lite.” There are numerous occasions where a statement is given along the lines of “construction best management practices” will be followed. Frankly, that is not sufficient as it tends to overlook and then fails to address critical issues of significant impact.</p> <p>I recognize the EA is identified as a draft but even at this stage it could benefit from a thorough review. For example, without detailed search, I noted that the reference Mullineaux, 1987 is listed in the text but not in the references.</p> <p>There appears to be a conundrum from a mantra that alternative scenarios cannot be considered because of financial constraints, e.g., moving the cantonment area. That seems to be incongruous when it is noted that the military annually contributes \$12.2 billion or 18 percent to Hawaii’s GDP of \$64 billion. This entire project over 8 years is only \$220 million.</p> <p>The commentary restriction of 200 words to discuss issues of the EA at PTA is highly limiting and can easily lend itself to having the issue rejected pro forma because of an excuse that it is not sufficiently explanatory to include it as part of a review. I hope this will not be the case for the comments you receive. Specifically, it is necessary to leave out references but I would hope the review group has enough savvy and familiarity with the EA to be able to recognize the reason for the comments and to place them with the associated text sections with which they should be familiar.</p> <p>I have six issues to bring to your attention. I have made a sincere attempt to help improve the EA as a comprehensive document but conclude that an EIS will be the proper approach for this project. Let me state that if you need more information, including locations in the EA of my concerns, contact me. In fact, I would hope you would consider this cover letter as a separate comment of concern and include it as part of the EA review process.</p> <p>1) Safety of workers from exposure to toxins during demolition and construction creating significant impact.</p> <p>The U.S. Nuclear Regulatory Commission (NRC) has granted a possession license to the US Army for the residual depleted uranium toxin that was used for training activities in the 1960s. A US Army contractor report on seeking the location of the DU residuals stated that some of the larger DU pieces were removed from the explosive impact ranges and placed in secure storage at PTA. This location must be identified, NRC approval given, a future secured storage area identified, with mandated precautions taken and stated. It is a critical issue of significant</p> | <p><b>Cover letter comments</b><br/>There is no restriction on the length of comments beyond the email system’s size capacity.</p> <p>The Mullineaux citation is noted. The full citation is Mullineaux, D.R., D.W. Peterson and D.R. Crandell. 1987. “<i>Volcanic Hazards in the Hawaiian Islands</i>” in Volcanism in Hawai‘i, U.S. Geological Survey Professional Paper 1350, U.S. Government Printing Office, Washington, D.C.</p> <p><b>Comments #1-4.</b> There is no known Depleted Uranium (DU) contamination in the project area and the proposed improvements will have no impact on DU. This issue is outside the scope of this action and outside the scope of the EA. However, the following discussion is provided in response to your Comments #1-4 which relate to DU.</p> <p>Depleted Uranium (DU) is created during the process of converting natural uranium into fuel for nuclear power plants or nuclear weapons. DU was an alloy utilized in the M101 spotting round, a component of the Davy Crockett weapon system that was in use between 1960 and 1968 (U.S. Army Environmental Command, 2013). After confirming the presence of DU on a</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

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|     |                         |              |      | <p>impact and requires a full discussion that can only be provided by an Environmental Impact Statement.</p> <p>In addition, it is imperative that the construction workers be advised of the presence of depleted uranium at PTA and be protected from inhalation of aerosols created by construction and military training activities. Increased health risks are very much higher for inhaled alpha-particle emitting particulates than for whole body exposure.</p> <p>Depleted uranium may not be the only toxic material present that could expose construction workers, soldiers, contractors, visitors, and staff during construction. A recent court ruling seeking cleanup of contaminated PTA lands acknowledged the migration of toxins from the impact areas.</p> <p>2) Transportation of demolition materials creates significant impact.</p> <p>There is woefully insufficient discussion given on the disposal of the demolished materials. This includes, among other concerns, mode of transport, number and type of vehicles to be used for transport including transport containment, possible escort vehicles, public notification means of announcing transport times, safety precautions and first response actions if a transport vehicle is involved in an accident creating a spill, the location of disposal, and the screening of materials for toxins. The creation of dust during demolition needs to be more fully addressed given the possibility of various toxins that have migrated from the impact areas.</p> <p>Before construction begins, the soils, air and previous construction materials should be screened for toxins as it is stated that it would, including depleted uranium that was absent form EA discussions. A generic comment of “following best practices” is insufficient and a dodge of the real practices that must be employed. PTA is not an ordinary or common construction site. A complete Environmental Impact Statement is the proper requirement to address these issues of significant and critical impact.</p> <p>3) Drainage modification causing significant environmental impact.</p> <p>The EA states that some drainage modifications are being made, some under previously approved plans and therefore not considered part of this EA. However, as the construction will create a cause-and-effect impact on the draining areas, it must be considered as having significant impact for this EA. The EA did not address how those modifications might impact an area used by the US Army to monitor sediment for migration of depleted uranium as a requirement for its possession license granted by the Nuclear Regulatory Commission. If the drainage modification either adds or detracts water from gullies feeding the sampling area including the water source footprint of the new buildings and paved areas, it will severely impact the analyses. From precursory topographic review, it appears that drainage from the cantonment area, just a few kilometers away, does feed the sampling area. This issue has significant environmental impact, influencing the sample collection area. A water-flow pathway analysis should be conducted and contained in the environmental impact statement. This will require a full EIS to be prepared.</p> <p>4) Proper air control systems to remove particulates creating significant environmental impact.</p> <p>This is an environmental issue that must be addressed through construction activities. Military training generates hazardous environments that impact the cantonment area, the nearby Girl Scout Camp and County Park. Perhaps the most serious is the generation of hazardous airborne particulates from the munitions used past and present at the facility. As addressed previously, depleted uranium, used in the 1960s, in its most deadly oxide form can be resuspended in the air by explosions and ancillary ground traffic. The particulates can be inhaled by the troops, civilian employees, visitors, and Saddle Road users. A recent court ruling has acknowledged that the migration of toxic materials leads to contamination of areas away from the impact training areas of PTA.</p> | <p>portion of Schofield Barrack’s impact area in 2006, the public was notified and the Army’s 2007 <i>Archive Search Report on the Use of Cartridge, 20mm Spotting M101 for Davy Crockett Light Weapon M28, Schofield Barracks and Associated Training Areas, Islands of Oahu and Hawaii</i> (USACE, May 2007(revised)) was drafted (U.S. Army Environmental Command, 2013). The Army has since engaged in assessing potential hazards from DU at PTA, the methods are discussed in detail in Section 3.12.3.1 of the <i>Final Environmental Impact Statement (EIS) for the Construction and Operation of an Infantry Platoon Battle Course at Pohakuloa Training Area, Hawaii</i> (U.S. Army Environmental Command, 2013).</p> <p>Presently, there are four known Ranges at PTA—10, 11T, 14, and 17—where the Davy Crockett weapons system may have been in use (U.S. Army Environmental Command, 2013). Section 3.12 of the Infantry Platoon Battle Course (IPBC) Final EIS states that “...based on what is currently known of DU at PTA, no adverse human health impacts are likely to occur as a result of exposure to the uranium present in the soils at the installation” (U.S. Army Environmental Command, 2013). The sampling results were well below World Health Organization and U.S. Agency for Toxic Substances and Disease Registry (U.S. Army Environmental Command, 2013).</p> <p>DU is regulated under the sole authority of the Nuclear Regulatory Commission (NRC), which has been fully engaged with PTA. According to the PTA Radiation Safety Officer/Safety Manager, and there is no known DU at the Cantonment. The State Department of Health is continuing to independently monitor ambient radiation levels in areas adjacent to DU use. Since 2007, all DOH monitored radiation levels have been within normal background levels. The DOH has also indicated that it is unlikely the general public is inhaling small DU dust particles carried by winds. This is because the M101 spotting round does not vaporize but instead breaks into large fragments upon impact. Wind would not carry these particles very far because they are heavier than soil and not easily carried through the air (DOH, 2013).</p> <p>Given the nature of the spotting rounds, the low potential for DU to become airborne, and the distance to populated areas, the Agency for Toxic Substances and Disease Registry (ATSDR), a federal health agency, concluded that the general population around PTA is not exposed to DU. The State DOH has concurred with ATSDR’s conclusion. (DOH, The Facts about Depleted Uranium in Hawaii, August 2013). URL= <a href="https://health.hawaii.gov/irhb/files/2013/12/Hawaii-DOH-DU-Fact-Sheet-8-21-131.pdf">https://health.hawaii.gov/irhb/files/2013/12/Hawaii-DOH-DU-Fact-Sheet-8-21-131.pdf</a></p> <p>There is no known DU contamination at the Cantonment and the proposed improvements will not increase the risk of DU exposure or increase health risks to humans. Occupational safety protocols will be strictly enforced by the selected contractor to comply with the law and protect the health and safety of construction workers.</p> <p>The proposed improvements will not increase the risk of DU exposure or increase health risks to humans. Occupational safety protocols will be strictly enforced by the selected contractor to comply with the law and protect the health and safety of construction workers.</p> <p><b>Comment #2.</b> As noted in the EA, USAG-HI and Hawaii County waste reduction/landfill diversion policies will minimize the amount of construction and demolition (C&amp;D) waste generated by the project (the Army’s goal is to achieve at least 60% C&amp;D recycling). Section 2.3.3.1 of the EA outlines the extensive construction best practices to be implemented during the C&amp;D process to avoid and minimize adverse impacts to the environment. The selected contractor will determine the methods and means of managing of any hazardous wastes in accordance with federal and state regulations (e.g., demolition debris with asbestos containing</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

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|     |                         |                        |                          | <p>Consequently, the structures to be used as replacements need sufficient air filtration systems with the capability to minimize the possibility of toxic materials inhalation. At a minimum, the generation of dust from construction activities is the immediate problem of great significant impact.</p> <p>There is a standard, ALARA, that must be followed to minimize possible exposure. This must be addressed in an EIS. It is important that the soldiers not be placed in harm’s way before they are deployed to a battleground.</p> <p>5) Waste-water facility with significant environmental impact.</p> <p>It is noted for future planning that potable water from aground water source is being sought to supply PTA. It is stated that the current waste-water design is being replaced with septic and absorption beds. This is insufficient. A full waste-water treatment facility must be built. As noted in the EA, the cantonment facility is capable of housing 2,300 troops. This is equivalent to a village and merits full-scale waste-water treatment. The aquifer identified by UH studies is relatively shallow and will be subject to receiving leachates of the septic and other drainage-management systems through the porous basalts and possibly toxins carried by the surface drainage control system. Thus, this overlooked issue of significant impact must be addressed properly with the requirement of a full waste-water treatment facility and discussed in a full EIS.</p> <p>6) Socioeconomics impact as a critical significant issue.</p> <p>The EA notes Executive Order 13045 addressing the protection of children (p. 3-26 of EA). It states that “There are no nearby schools or other facilities where children might be present.” This is highly inaccurate and leads to a false conclusion of no significant impact. It must be addressed in an EIS. There are numerous nearby facilities where children might be present including the PTA cantonment area; the Mauna Kea Recreational Area, nearby Girl Scout Camp, occasions where schoolchildren are invited to PTA, and perhaps even the days when children accompany parents to work.</p> <p>Relating to Air Quality of section 3.7, the EA fails to address the dust generated from even moderate wind events as there is little ground cover keeping dust from being generated. This is a frequent observation of travelers of the Saddle Road. As part of a good-neighbor policy, the military should consider providing efficient air-scrubbing systems and maintenance to facilities of the Camp and Park.</p> <p>At a minimum, acceptable efficient air-handling systems capable of removing airborne toxins must be installed in the buildings at PTA. There are other alternatives that have been presented at Hawaii County Council and Committee meetings; see County Resolution (639-08).</p> <p><i>(continued in comment #23)</i></p> | <p>material and lead based paint). In the event that waste is encountered and needs to be transported for off-site disposal, it shall be in accordance with applicable regulations under the Resource Conservation and Recovery Act (RCRA), as outlined in 40 CFR part 263 (Federal Standards for Transporting Hazardous Waste). See <a href="https://www.epa.gov/hw/hazardous-waste-transportation#requirements">https://www.epa.gov/hw/hazardous-waste-transportation#requirements</a></p> <p><b>Comment #3.</b> The proposed drainage improvements are limited to the cantonment and designed to reduce existing flooding experienced within the cantonment and will not increase the amount of runoff from the cantonment – or the areas used by the US. Army to monitor sediment for migration of DU as required by the NRC.</p> <p><b>Comment #4.</b> See response to comments 1-4 above regarding airborne particles.</p> <p><b>Comment #5.</b> Cantonment occupancy fluctuates widely during the year depending on training cycles. There are times where it’s in caretaker status and other times where it’s at full capacity. This fluctuation in annual loading levels is challenging to serve from an infrastructure systems perspective. The septic systems being constructed to conform with current Hawaii Department of Health standards are planned to accommodate baseline loads – supplemented during peak training periods (a few times a year), by portable toilets supported by commercial haulers. The proposed FIP improvements do not include development of a new water source. As noted on p. 2-8 (line 27 and 28) of the EA, the Hawaii Department of Health has approved the proposed cantonment sewer system concept design.</p> <p><b>Comment #6.</b></p> <p>The Army stands by its statement that the proposed FIP improvements take place within a secured, active military training installation where children are not allowed, and non-military personnel are permitted by invitation only. There are no schools in the vicinity of the project. The Mauna Kea Recreational Area is identified in the EA as a nearby use.</p> <p>Related to air quality, the proposed improvements will not increase dust generation, other than possible temporary impacts during the construction period. The PTA vicinity is subject to high winds due to its geography, topography, and sparse vegetation.</p> <p>The cantonment has operated at its current location for over 60 years and the operation and tempo is not expected change. USAG-PTA is a strong member of the Hawaii Island community and supports a wide range of community and recreational activities. Although PTA strives to be a good neighbor, mitigation of existing windy and dusty conditions at the park and camp ground is not the responsibility of this project. Like any industrial facility operator, safety is and will continue to be one of the Army’s main concerns.</p> |
| 5   | Individual              | Rich Lepak, Auctioneer | Email dated 30 July 2018 | <p>My name is Richard Lepak - Auctioneer, and I have an idea that I would like for you to consider. This past week I traveled by the military base four times going between Hilo and Kona. I got thinking about the base because it is in very poor condition, too poor to rebuild. I am thinking that the old facility would be best sold outright, and a whole new base be constructed.</p> <p>I believe the old base could be made into its own town. This would open a range of uses; gas station, restaurants, bar, entertainment, housing, small manufacturing, retail sales, hotel</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>The recommendation to construct a new cantonment was evaluated and dismissed because of the significant investment in site work, new buildings and infrastructure, and availability of unconstrained land (see Section 2.4.2 of the EA). The FIP (proposed action) was determined to be the most effective way to meet the project’s purpose and need.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |



## FNSI Appendix

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| No. | Agency/<br>Organization | Name/Contact                                                           | Date                      | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|     |                         |                                                                        |                           | accommodations...This new town would be open to US military and visiting families, tourists, locals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 6   | Individual              | Jim Albertini<br>Malu’Aina Center for Non-Violent Education and Action | Email dated 31 July 2018  | <p>Our organization requests an extension of the comment period beyond Aug. 7, 2018 for the EA concerning construction of new buildings at the Pohakuloa training Area (PTA). The original publication in the Hawaii tribune-herald on July 13, 2018 page A-8 listed a site to view the EA that was not accessible. As far as I know there has been no republication of a correct on line site for viewing the document. I had to make numerous phone calls to get a correct link to access the site.</p> <p>In addition an Army site link contains a WARNING to my web browser and others that the site is not secure and advises not to go forward. This is not conducive and inviting for public input and should be corrected.</p> <p>I would suggest at least a 2 week extension of the deadline for public comments and a republication in the Big island daily newspapers of an online site for accessing the EA if you really want public input.</p>  | <p>Request to extend the EA comment period. The Army's official Notice of Availability of the Environmental Assessment and Draft Finding of No Significant Impact was published in the Hawaii Tribune-Herald and West Hawaii Today newspapers and the State of Hawaii's Office of Environmental Quality Control’s <i>The Environmental Notice (TEN)</i> on July 8, 2018, and included the Army's website link for the document, as well as USAG-HI’s contact email address (the website link was inadvertently not reproduced in the July 8 edition of the <i>TEN</i> – but was included in the subsequent July 23<sup>rd</sup> edition). Front page newspaper articles describing the proposed action and notice of availability of the EA were published on July 11, 2018 (Star Advertiser) and July 13, 2018 (Hawaii Tribune Herald and West Hawaii Today). Hard copies of the EA/Draft FNSI were available at the Hilo, Kailua-Kona, and Waimea public libraries, and the Hawaii State Library.</p> <p>The Army followed guidance provided in 32CFR651 and feels it has provided appropriate public notice and time for the public to submit written comment, and declines the request for a two-week extension to the public comment period.</p> |
| 7   | Individual              | Donna Grabow<br>Hilo, Moku o Hawaii                                    | Email dated 2 August 2018 | <p>Pohakuloa needs to be shut down because military toxins, including radioactive Depleted Uranium oxide particles (DU oxide) which have been used in the 75 years of bombing and other live-fire at PTA. There needs to be comprehensive, independent testing and monitoring for DU oxide and other military toxins at these PTA buildings which are adjacent to the newly improved Saddle Rd. The EA does not make clear the land status of the building area.</p> <p>The lease at Pohakuloa expires in 2029 (one dollar contract).</p> <p>This military bases needs to be shut down, as it is causing destruction of the Royal Hawaiian Land, which was surveyed and patented in the 1800s Since there is no annexation recognition by international law, isn't the Presidential and Governor Executive Orders and leases of illegally seized Hawaiian Kingdom land illegal?</p>                                                                           | <p>See RTC #4 regarding DU.</p> <p>The Army appreciates your participation in the public review process. Your comments regarding the presence of the military, annexation recognition, and leases of illegally seized land have been included as part of the administrative record for this process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 8   | Individual              | Jim Good, Kea’au                                                       | Email dated 6 August 2018 | <p>Increasing national homelessness, widening gap between the extreme rich and poor, lack of sufficient funding for health and education, the closing of our borders to people fleeing violence caused by US policies in El Salvador, Guatemala, Honduras during the 1970’s and ‘80’s - but there ALWAYS seems to be plenty of money for whatever the military asks for - regardless of need!</p> <p>Just say NO! to the military. Just for once.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>The Army acknowledges your concerns about homelessness and other domestic and international social issues. Although important issues, they are outside the scope of this EA.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 9   | Individual              | Bob Ernst                                                              | Email dated 6 August 2018 | <p>As a veteran, I also raise the issue of additional cost of maintaining and training ground troops in Hawaii, and the fact that the cost of transporting troops from Oahu to Hawaii Island, and that readiness is compromised because Oahu troops do not have adequate training facilities. There is no justification to keep ground troops in Hawaii. The only reason for Chamber of Commerce/CODEL support to keep ground troops here in Hawaii is the economic benefits from the monies derived from troops stationed here. This is anti-military/anti readiness because it unnecessarily drains the Department of Defense (DOD) budget. Take saddle road as an example, paid for with DOD tax \$\$\$. Base these ground troops on the mainland where plenty of military bases exist.</p> <p>Save taxpayers the Hawaii surcharge. Make our DOD tax dollars work for readiness, not wasted and squandered on unneeded facilities. Think base closure.</p> | <p>DoD decisions regarding the location and extent of military training activities are beyond the scope of this EA.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 10  | Individual              | Geoff Shaw                                                             | Email dated 6 August 2018 | <p>I am sending a cover letter and multiple comments in pdf form concerning the PTA FIL EA that was recently released. I hope you confer with the request to extend the deadline since wrong information was printed by the press. Please inform me that you have received this and my comments are in a format that can be used.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>See RTC #6 regarding extending EA comment deadline.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

FNSI Appendix  
USAG-HI Public Comment Tracker

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|     |                         |              |      | <p>1. The draft EA for the proposed improvements of the cantonment area of PTA only reinforces that an EIS is necessary. Considering how redundant and inadequate the draft EA is one would think that the information it does contain would be beyond reproach but not even that is true. If the forces that control PTA ever decided to have truly transparent consultations with native Hawaiians and compiled a proper comprehensive EIS then maybe an informed plan could be made to guide the future of PTA. This draft mentions two alternatives for building size but only vaguely explains the footprint if the buildings are similar to current size and goes into no detail if the large building option becomes available. This gives the impression that this project isn’t ready to be evaluated because important decisions are still to be made. Evaluating the cantonment area without more insight into the entire training area gives an incomplete picture of the planning elements. To give an example the EA makes a point of the cantonment area being in lava zone 8 while most of the training area is in lava zone 2 or 3. If long overdue Mauna Loa erupts and inundates the training area what good are the recently refurbished buildings, they are virtually useless. Because of the limitations imposed on us when commenting on this EA I will have to make numerous separate comments to further explain why this document is inadequate and a comprehensive EIS is needed before PTA gets updated.</p> <p>2. The no-action alternative is not a legitimate alternative to compare with the effects of the facility improvement action. A downsized installation that incorporates clean-up with training exercises would be a much better comparison. What is the threat that justifies a huge training facility on Hawaii Island, the ongoing conflict in Afghanistan and various anti-terrorist police actions seem to be the main combat role of the military and in both instances the clean-up of UXO present in PTA would be the best training available to prepare our forces to the actual threats these actions present. A comprehensive EIS would be the best way to assess these various alternatives.</p> <p>3. This EA doesn’t give the context necessary to understand the land use issues that the existence of PTA takes for granted. The research that me and others have done seems to indicate that the cantonment area was granted to the US military by a Territorial Governor’s Executive Order #1719 in January of 1956 but none of this is mentioned in the EA. Executive Orders such as this only give permission for use, they do not confer title. The legitimacy of the Territorial government that granted this is debatable, especially in the context of the Apology Bill, which makes clear the overthrow of the Hawaiian government was illegal. Most of PTA has been acquired through questionable mandates and leases and these issues would best be considered with a comprehensive EIS.</p> <p>4. On numerous occasions the EA states that the FIP will bring buildings up to code, what code is this referring to, there are numerous. Will the county of Hawaii have the chance to review the plans for code violations, such as improper egress. With a capacity of 2300 personnel on 80</p> | <p><b>Comment #1.</b> The analysis in the EA Chapter 3, Affected Environment and Environmental Consequences, indicate that the proposed action (building components of the PTA FIP) would not have a significant effect on the natural or human environment, therefore an EIS is not warranted.</p> <p>Sufficient detail on the larger building footprint (reasonable alternative) was provided in the EA to support the environmental impact analysis. The EA noted that the larger building would take the place of five of the Quonsets and would also be one-story and of similar construction to the preferred alternative. The larger buildings would be constructed within the general footprints of the existing barracks and the general cantonment roadway system, and therefore the overall community pattern and unit integrity would be retained. There would be no increase in the number of beds or capacity of the cantonment. The actual design of the larger buildings (framing, foundation etc.) would be determined during the design phase.</p> <p>The purpose of the PTA Cantonment FIP EA is to disclose and evaluate the impacts (direct, indirect, short-term, long term, and cumulative) of the proposed cantonment improvements. The Cantonment FIP does not propose any improvements at the training ranges and does not affect range operations. As noted in the EA, the Cantonment is located in lava Zone 8, the second lowest hazard zone on Hawaii Island (defined as: only a few percent of the Zone 8 area has been covered with lava in the past 10,000 years). The Army notes your concern regarding the potential of a Mauna Loa eruption. Given PTA’s location, there is always the possibility that a volcanic eruption could impact non-cantonment areas of the 130,000 acre training range. However, speculating on future eruptions of Mauna Loa is outside the scope of this EA.</p> <p><b>Comment #2.</b> The evaluation of a “No action” alternative is required for environmental analyses under the federal National Environmental Policy Act (NEPA). The Council on Environmental Quality (CEQ) regulations (40 CFR 1500–1508) for implementing NEPA states that NEPA analyses shall “include the alternative of no action” (40 CFR 1502.14).</p> <p>The “Alternatives” evaluated in the EA represent alternative ways to meet the project’s stated purpose and need. For this project, the “Purpose and Need” is to address the substandard condition of the Cantonment’s physical facilities which has negatively impacted the health and safety of Soldiers training at PTA (EA p. 1-9). Environmental clean-up is an important activity that the Army remains committed to. However, it is not relevant to the Purpose and Need, and therefore, was not seen as an alternative to the proposed action.</p> <p><b>Comment #3.</b> The Army acknowledges your opinion that most of PTA has been acquired through questionable mandate and leases. Your comments are included as part of the administrative record for this process. See response to your Comment #1 above regarding the need for an EIS.</p> <p><b>Comment #4.</b> The FIP improvements are subject to federal Unified Facilities Criteria (UFC) which provide planning, design, construction, sustainment, restoration, and modernization criteria, in accordance with DoD Directive 4270.5 (Military Construction). Because the FIP improvements are entirely within federal property, the County will not review plans. The project does not alter the Cantonment’s roadway access to and from the State’s DKI Highway. The reference to the gable roof form is in error; it should say hip roof.</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact | Date | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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|     |                         |              |      | <p>acres why isn’t a sewage treatment plant being considered instead of multiple septic. The EA mentions the possibility of two different building sizes but gives no detail of the footprint if the larger are used and no illustration. The illustration of the smaller building shows a hip roof but the text says the roof will have gables. Will the abandonment of cesspool covers and walls occur within the confines of the cantonment area or PTA as a whole which could possibly include land leased from the state. A comprehensive EIS is needed to do a proper evaluation.</p> <p>5. In the socio-economic section of this EA no mention is made of negative effect PTA and the various activities associated with training have on the Native Hawaiian people. During Sec.106 consultations and various community meetings I have heard them express their anguish when they witness or feel the effects of training exercises. Also brush fires that burn outside the confines of the training areas are generated by these activities. Living on an island with a constant volcanic threat and dealing with the effects of colonialism and its inherent genocide their sensitivity to this issue is understandable but the military ignores it as evidenced by not even giving this consideration in the EA. A comprehensive EIS is needed to explore this issue fully.</p> <p>6. The history that is presented in this EA is inadequate both in relation to land use prior to PTA and after the US military chose to use Hawaii Island for training. The Saddle region has a rich history but it is understandable that those who choose to abuse the land will try their best to disparage that history. There are a lot of holes in the history of military use of PTA that has never been explained. During the early years from WWII to 1956 and 1956-64 outside of the cantonment area, what authority was sited to allow training there. Previous to laws being passed to protect burials and cultural artifacts and sites was any monitoring done whatsoever, if not has anyone assessed how much damage was done during this time. Once again a comprehensive EIS needs to be done to have a full understanding of the context of PTA.</p> <p>7. Having participated in Section 106 consultation on another subject with PTA personnel I have to question whether the consultation they site in the EA was valid and meaningful. I contacted a person listed as one of the consulting parties and that person said they did not participate in anything that could be considered a consultation. Maybe the military sent information and asked for a response but none was rendered, therefore no consultation. A comprehensive EIS accompanied by a legitimate section 106 consultation should be done.</p> <p>8. The cantonment area is historic because of its Territorial connection, it was a Territorial Governor’s Executive Order (#1719) that allowed the military to construct the Quonset huts, which were mostly installed at the end of the Territorial era. This is important because the occupying Territorial government had seemingly given the US military free reign to litter the landscape of Hawaii Island with munitions in numerous locations since the onset of WWII. This has created the hazard of UXO across vast tracts of land that impacts safety to this day. The Quonset huts are a living reminder of the total disregard the US military has for the land and the sovereignty of the Hawaiian people and should be maintained as a reminder. A comprehensive EIS is needed to give further study into the historic value of the Quonset huts.</p> <p>9. In the EA it is stated that the current configuration of buildings is inefficient but the plan is to maintain that configuration. Also the EA says best management practices will be employed but I witnessed on August 1 ground disturbing construction and there was no dust remediation being employed on a very windy day. What is the oversight to ensure BMP, I saw nothing in the EA that reinforces this and gives little confidence that the current groundwork should have</p> | <p>All sewer improvements, including cesspool closures, will occur within the cantonment (federal property). As stated in RTC #4 (response #5), the State Department of Health has approved the proposed cantonment sewer system concept design.</p> <p><b>Comment #5.</b> The analysis in the EA has determined that the FIP building improvements will not have a negative socio economic impact on Native Hawaiian people.</p> <p>The proposed project will not increase the incidence or severity of brush fires within or outside the confines of the PTA training areas. These areas are outside the scope of this EA. The Army remains committed to minimizing the risk of brush fires associated with its activities.</p> <p><b>Comment #6.</b> Your opinions on these issues are acknowledged and have been included as part of the administrative record for this project.</p> <p>As noted in the EA, there have been a number of archaeological surveys within the cantonment by the PTA Cultural Resources Management Office, several including archaeological inventory surveys. None of the archaeological studies have identified any archaeological deposits or sites within the cantonment area. The Army is committed to protecting cultural resources at PTA and continuing cultural stewardship.</p> <p><b>Comment #7.</b> Separate Section 106 consultations were conducted for archaeological (surface and subsurface) resources and historic architectural resources. Both consultations followed the process identified in 36 CFR 800, Subpart B, including consultation with Native Hawaiian organizations that might attach religious and cultural significance to historic properties. The State Historic Preservation Officer (SHPO) concurred with the Army’s findings and determination. The consultations are documented in Appendix A1 and A2 of the EA.</p> <p><b>Comment #8.</b> The historic value of the Quonsets was evaluated in a 2002 Architectural Survey and Evaluation of the Cantonment Area (Hayes 2002 with 2015 addendum). In a letter dated June 27, 2017, the Keeper of the National Register of Historic Places found that the individual buildings at the PTA Cantonment were not individually eligible for listing on the National Register. In a January 18, 2018 Determination of Eligibility Notification, the Keeper stated that a potential PTA historic district was not eligible for listing in the National Register. This is documented in Appendix A2 of the EA.</p> <p><b>Comment #9.</b> The replacement of the Quonset huts with modern CMU framed buildings will remove the inefficiency of the original arched design and associated problems with the restricted head room along the outside walls. As noted in Section 2.4, the Army evaluated a wholesale redevelopment of the cantonment on a new site but given fiscal realities, it chose to focus on the minimal level of improvements needed to resolve basic safety and code issues – and that was to proceed with a one-for-one replacement of the individual buildings (along with addressing sewer system compliance issues, reestablishing the engineered drainage system and modernizing power and telecommunications systems).</p> <p>All contractors at PTA are required to follow construction best management practices, including dust control. Should you have concern about construction activity compliance with</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

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|     |                         |                                                                         |                                      | <p>been allowed with just a Record of Environmental Consideration. A comprehensive EIS would address issues such as this.</p> <p>10. This EA reiterates the notion that there are no TCPs that meet National Park Service criteria, why would the criteria be the same for an area that already offers protection (NPS) compared to a military training area which offers little protection without a designation. How many potential TCPs were destroyed by military activity before the military started their monitoring program, how many potential TCPs are within the ICM boundary where the military says it’s not safe to survey. Does this sound like issues the NPS has to consider when designating a TCP. Does the conclusion that past excavations in the cantonment area had no archeological finds mean that little or no cultural monitoring is planned. There didn’t seem to be any cultural monitors present at the excavation witnessed on August 1. A comprehensive EIS is needed to ensure proper compliance.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>environmental regulations, please report them to the USAG-PTA Public Affairs Officer at (808) 969-3340, and provide information on the activity observed, location, date and time.</p> <p><b>Comment #10.</b> Traditional cultural properties. As stated in the EA, the 2012 evaluation by Pacific Consulting Services, Inc. concluded that no areas within PTA appear to qualify for consideration as a TCP under U.S. Department of the Interior National Park Service (NPS) criteria. The evaluation followed the <i>U.S. Department of the Interior National Park Service Guideline for Evaluating and Documenting Traditional Cultural Properties</i> (National Register Bulletin #38), which evaluates the property for eligibility using four basic criteria set forth in the National Register regulations (36 CFR Part 60).</p> <p>No archaeological monitoring is necessary or planned during construction. The State Historic Preservation Officer concurred with the Army’s determination that that there would be “no historic properties affected,” by the proposed improvements. This determination was based on a number of archaeological surveys within the cantonment, including several that included archaeological monitoring, with no historic properties identified. In the event that construction encounters inadvertent finds, the contractor will immediately halt construction activity, the PTA Cultural Resources Management Office (CRO) will be notified, and the SHPD will be contacted for further instruction. See response to your Comment #1 above regarding the need for an EIS</p> |
| 11  | Organization            | Malu ‘Aina Center for Non-Violent Education and Action<br>Jim Albertini | Email dated 4 August 2018<br>(8 pgs) | <p>Our organization calls for a Full Environmental Impact Statement (EIS) on the proposed \$210 million building project at PTA. There are lots of things that need more consideration:</p> <p>1. Accident potential zone (APZ). <a href="https://mapcarta.com/24060168">https://mapcarta.com/24060168</a>, <a href="https://mapcarta.com/24060168">https://mapcarta.com/24060168</a> shows a good map of the proximity of the Bradshaw air field at Pohakuloa to the site of the proposed new building project. This map should be included in the EA and EIS. The airfield is in direct line with the housing project. The predominant wind is from the east and often quite strong which would require aircraft to take off toward the east, not the west as falsely indicated in your EA. A permanent waiver granted by the U.S. Army Aeronautical Services Agency dated October 12, 2017, so land use incompatibility is no longer a factor is hereby challenged on the basis of putting troops lives in unnecessary danger. EA pp 2-16 to 2-17.</p> <p>2. Our organization calls for a Full Environmental Impact Statement (EIS) on the proposed \$210 million building project at PTA. There are lots of things that need more consideration: On the opening page of the EA Draft finding of No significant impact, it is stated at the bottom of the page that "The preferred alternative would be located entirely within federally-owned land..."We challenge that statement. Show us the title. More information in recent years has become available about the US illegal overthrow and continuing illegal occupation of the Hawaiian Kingdom in 1893. The Reciprocity treaty of 1875 and amendments to follow in the Bayonet Constitution of 1887 were illegal. No treaty of Annexation of Hawaii exists. Therefore, all Presidential and Governor Executive Orders, leases, alleged purchases of land by the U.S. violate article 1, section 8, clause 17 of the U.S. constitution.</p> <p>3. There are lots of things that need more consideration: We call for a comprehensive, independent assessment of contaminants in the proposed construction area, NOT DURING</p> | <p>The analysis in the EA Chapter 3, Affected Environment and Environmental Consequences, indicate that the proposed action (building components of the PTA FIP) would not have a significant effect on the natural or human environment, therefore an EIS is not warranted.</p> <p><b>Comment #1.</b> APZ<br/>The Army has carefully considered land use compatibility and the safety of its personnel in planning for the FIP, as evidenced by the recently issued USAASA permanent waiver and its ongoing restrictions on certain flight operations.</p> <p><b>Comment #2.</b> See RTC #10 Response #1.</p> <p>Your comments regarding the U.S. illegal overthrow and illegal occupation are acknowledged and are included as part of the administrative record for this project.</p> <p><b>Comment #3.</b> Testing for contaminated soils and hazardous building materials (asbestos, lead based paint, etc.) will be completed during the construction period, prior to demolition of</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



FNSI Appendix  
USAG-HI Public Comment Tracker

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|     |                         |              |      | <p>CONSTRUCTION (as called for in the EA summary environmental analysis section) but prior to construction as part of an EIS. PTA has been subjected to 75 years of bombing and various live-fire by a wide range of weapons, including radioactive Depleted Uranium (DU), chemical and biological weapons, etc. etc. It is highly likely that many of these contaminants are in the proposed area for demolition and construction. We want a complete independent assessment prior (not during) demolition that is transparent and assures the confidence of the community. Such an independent assessment should include community oversight representatives.</p> <p>4. Our organization believes that PTA is a toxic waste dump after 75 years of bombing and live-fire, with a toxic stew of chemicals used, including Depleted Uranium (DU) radiation. Given this reality it should be assumed there may likely be extensive contamination in the proposed demolition and construction area. After all, while PTA has a designated "Impact Area" its maps of PTA say "WARNING: ALL OF PTA IS CONSIDERED A DUD HAZARD AREA." In simple terms, whatever was used anywhere on the base should be considered in the proposed construction area. I would go much farther. It is likely off the base as well, like Bob Dylan says "blowing in the wind"... at Mauna Kea park in the children’s playground, at the nearby Girl Scout Camp, into and on all the vehicles that use the Daniel K. Inouye (Saddle Road) highway and downwind --north, south, east and west, depending on the wind conditions of the day. The statement on page vii of the executive summary which says "Employment of personnel qualified to identify and handle hazardous materials if unexpectedly encountered" shows the disconnect from reality of the approach to this demolition and construction project. It is NOT "unexpectedly encountered." It is expectedly encountered. And we want a more comprehensive look at the matter through a full EIS.</p> <p>5. EA point #7 On pages xiv -xvi where abbreviations and Acronyms are listed, the only specific toxins listed are LBP for Lead Based Paint and ACM for Asbestos containing material. Where are all the other abbreviations and acronyms for toxic substances used on Pohakuloa that could be blowing all over the base and off base. Things like DUO for Depleted uranium oxide particles created when DU metal is burned after being hit with high explosives. What about all the other chemicals in munitions? Where are there abbreviations and acronyms? Remember your words-- "WARNING: ALL OF PTA IS CONSIDERED A DUD HAZARD AREA."</p> <p>6. EA point #8 ground water contamination at PTA It is a well-known fact that the US military is the greatest single polluter on the planet. In section 3.8 of the EA (page 3-22) it is noted that the University of Hawaii in partnership with the Army developed a successful test water well and encountered an aquifer at 4,600 feet elevation in the PTA cantonment area, the site of the proposed building project. Additional wells have also been drilled. What contaminants were found in the water found, especially the water at shallow depths within the cantonment area? I would suspect that the known polluter of such water is none other than PTA and its toxic stew that it's been making for 75 years.</p> <p>7. EA point #9 It is not disclosed in the present EA how many live-rounds and what kinds are fired annually at PTA. Also the cumulative total of live rounds and tonnage of munitions fired at PTA. And the impact should go beyond live rounds, since technically the Radiation Davy Crockett Depleted uranium rounds were not live-fire but designated as "spotting rounds." As part of the Stryker EIS done more than 10 years ago, it was stated that 14.8 million live rounds were fired annually at PTA. A list and quantity of all live and non-live rounds fired should be part of the cumulative impacts because such toxins, though not actually fired on the proposed site of this EA, could possibly impact the site via wind drift, water, etc. What kind of weapons</p> | <p>structures and construction activity. Environmental testing will be conducted by independent, Hawaii-licensed, certified professionals.<br/>See RTC #4 in response to comments about Depleted Uranium.</p> <p><b>Comment #4.</b> See RTC #4 regarding DU.<br/>The Army remains committed to continuing to protect the health and safety of people in surrounding communities, Soldiers and their families, and the civilian work force who live and work near PTA.</p> <p><b>Comment #5.</b> Acronym list is limited to terms utilized in the EA document.</p> <p><b>Comment #6.</b><br/>The status of the University’s groundwater exploration efforts is documented in the Cumulative Impacts section. As noted, regional landowners, including the Army, would benefit from a high-level, developable ground water source, should one be determined to exist (testing is still underway). The University’s testing program and potential for future production wells is not part of the proposed action but was included as part of the Cumulative Impacts because it’s an ongoing State initiative that is supported by the Army.</p> <p><b>Comment #7.</b> The Cantonment FIP is limited to the replacement of existing buildings within the cantonment area. The project will have no impact on frequency or tempo of range training operations or personnel. It will have no impact on the number or type of live rounds fired, or tonnage of munitions fired.</p> <p>See RTC #4 regarding DU.</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact                                                                                         | Date                                 | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|     |                         |                                                                                                      |                                      | <p>have been dropped on PTA by B-52, B-1 and B-2 bombers that have flown nonstop from Missouri, Louisiana and Guam? Are these dummy nuclear weapons and what is their make up? Do they or other weapons, besides Davy Crockett spotting rounds, contain DU for ballast? Nothing listed in the actions considered in the cumulative impacts analysis on page 4-2 gives a comprehensive picture of the quantity and kinds of weapons fired on PTA over 75 years.</p> <p>8. EA point #10 traffic On page 4-11 of the PTA EA it states that traffic is predicted to increase nearly 5 times present levels over the next 20 years. The cumulative polluting impacts of PTA on people who stop at Mauna Kea park, potential nearby Hawaiian Homes development plans, and the potential of spreading PTA contamination via vehicle traffic as well as the winds to all parts of the island needs to be addressed in a full EIS.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><b>Comment #8.</b> Other than a temporary increase in construction-related vehicles during project construction, the cantonment improvements will not increase the number of PTA personnel, employees or visitors. See response to your Comment #7 above regarding polluting impacts on the public.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 12  | Organization            | Isaac Paka Harp, Vice President<br>Hawaiian Patriotic League<br>P.O. Box 437338<br>Kamuela, HI 96743 | Email dated 5 August 2018            | <p>Let the record reflect that the Hawaiian Patriotic League is in FULL SUPPORT of all points submitted to you on this matter by Mr. Jim Albertini, Malu Aina Center for Non-violent Education &amp; Action.</p> <p>After well over a century, the United States of America continues to ignore the fact that the Hawaiian Islands were never annexed by the United States of America.</p> <p>The Hawaiian Kingdom remains an independent neutral state under the belligerent military occupation of the United States of America.</p> <p>Under the norms of international laws of occupation, the laws of the occupied state shall be enforced by the occupier, therefore, United States law has no lawful effect in our country.</p> <p>There is no question that United States has no lawful right or need to continue their prolonged military occupation of our country.</p> <p>United States military training in Hawaii, with its associated contaminations of Hawaii’s land, sea, and airspace with military toxins, are intentionally inflicted harms constituting premeditated war crimes.</p> <p>Let this communication serves as notice that the Hawaiian Patriotic League opposes the continued belligerent occupation and desecration of our country by the United States of America.</p> <p>We call for the immediate halt to the prolonged belligerent occupation and intentional violations of our human rights by the United States government</p> | <p>See RTC #11</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 13  | Individual              | Cory Harden, Hilo                                                                                    | Email dated 5 August 2018<br>(7 pgs) | <p><u><b>SUMMARY OF COMMENTS</b></u></p> <p><i>When touting the benefits of the project, the EA focuses on worldwide impacts. It says the cantonment and other PTA facilities are crucially important, and refers to how these facilities will support military actions statewide and worldwide for years to come.</i></p> <p><i>But for negative impacts, the focus narrows to construction only. The EA turns a blind eye to the significant, long-term environmental impacts of military actions, statewide, nationwide, and worldwide, that will be enabled by cantonment improvement.</i></p> <p><i>1. The EA should describe and evaluate negative impacts from past, present, and future actions at PTA, such as erosion, fires, impacts to native species and native Hawaiian culture, increased human trafficking, higher housing costs, and lost opportunities to use land for agriculture, recreation, housing, and commercial activity.</i></p> <p><i>2. It is disturbing that no areas quality as traditional cultural properties (TCPs) despite human burials, old trails, over 1,200 archaeological sites, people having “deep cultural attachment to</i></p>                                                                                                                                                                                                                                                                                         | <p><u><b>SUMMARY OF COMMENTS</b></u></p> <p><b>Comment #1.</b> The scope of this EA is to evaluate the proposed action, i.e., the implementation of the building components of the PTA FIP. The incremental impacts of the proposed action, when added to other past, present and reasonably foreseeable future actions, were analyzed in the Cumulative Impacts section of the EA. Several of the issues cited are addressed in the EA, e.g., erosion (Section 3.6), native species (Section 3.4), and cultural impact (Section 3.3). Other issues such as brush fires, human trafficking, and housing costs are legitimate concerns, but have no connection to the proposed action, and are not affected by the proposed action. Evaluation of lost opportunities for alternative land uses (agriculture, recreation etc.) is beyond the scope of this EA.</p> <p><b>Comment #2.</b> See RTC #10 Response #10 regarding TCP.</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact | Date | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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|     |                         |              |      | <p><i>the broad spectrum of natural and cultural resources”, and conclusions by the respected researcher just quoted, Kepa Maly, re. TCPs. It is also disturbing that probably many significant sites in the PTA impact area have been, and will be, destroyed with no mitigation.</i></p> <p><i>3. The EA should describe and evaluate impacts from numerous former military sites on Hawaii Island with unexploded ordnance and other hazards. Why is there always money for new projects, but not for cleanup?</i></p> <p><i>4. The airfield points directly at the cantonment, so planes must take off and land heading away from the cantonment, with tailwinds that increase risk. Improving the cantonment instead of relocating it perpetuates this risk.</i></p> <p><i>5. With a capacity of 2,300 troops, and a relatively shallow aquifer vulnerable to contamination, the cantonment requires full-scale wastewater treatment, not just septic tanks. Measures should be proposed to reduce risks from construction trucks, some carrying hazardous materials, on Saddle Road.</i></p> <p><u><b>SPECIFIC COMMENTS</b></u></p> <p><b>1 Purpose of and Need for the Proposed Action</b></p> <p><b>1.2 Background and Project Location</b></p> <p>As the largest training area in Hawaii, PTA plays a significant role in the training and readiness of U.S. Armed Forces in the Pacific. It offers the largest live-fire operations training area on U.S. soil in the Pacific, and offers realistic training opportunities not found elsewhere. This capability is critical to maintaining a ready force with global reach. <i>EA p. 1-1</i></p> <p><b>1.3 1 Purpose of and Need for the Proposed Action</b></p> <p>The mission of PTA is to provide a quality joint/combined arms facility that provides logistics, public works, airfield support, and environmental and cultural stewardship in support of the U.S. Army Pacific Command (USARPAC) training strategy, while maintaining an enduring partnership with Hawaii Island neighbors....the substandard condition of the physical facilities impairs mission readiness, by taking focus and resources away from the training mission. It has also negatively impacted training equipment, and jeopardizes the health and safety of Soldiers. <i>EA p. 1-9</i></p> <p><i>The EA also says</i></p> <p>“The deteriorating condition of the cantonment buildings would likely result in the temporary and/or permanent loss of some facility functions and increasing use of trailers and portable structures that would intrude into existing open spaces and thereby reduce operational flexibility.” <i>EA p. 2-18 and</i></p> <p>“The proposed investment reflects the Army’s long term commitment to PTA as a national training asset, and makes it less likely that the Army will reduce its presence at, and commitment to PTA.” <i>EA p. 4-11</i></p> <p><i>and the EA lists 20 years of planned projects here</i> Table 4-1, Past, Present, and Reasonably Foreseeable Future Actions, <i>EA p. 4-3</i></p> <p><i>When touting the benefits of the project, the EA expands the focus to worldwide impacts. It says the cantonment and other PTA facilities are crucially important, and refers to how these facilities will support military actions statewide and worldwide for years to come. But for negative impacts, the EA turns a blind eye to the significant, long-term environmental impacts of military actions, statewide, nationwide, and worldwide, that will be enabled by cantonment improvement. The focus narrows to immediate construction impacts: “Based on a</i></p> | <p><b>Comment #3.</b> This EA is limited to the proposed PTA Cantonment FIP. Discussion of former military sites on Hawaii Island is beyond the scope of this EA.</p> <p><b>Comment #4.</b> Airfield takeoff and landing See Comment #11, Response #1</p> <p><b>Comment #5.</b> As noted on p. 2-8 (line 27 and 28) of the EA, the State Department of Health (DOH) has approved the proposed cantonment sewer system concept design. During the construction period, some hazardous waste (e.g., demolition debris with asbestos containing material and lead based paint) will need to be transported for disposal. Transporters of hazardous waste must comply with applicable regulations under the Resource Conservation and Recovery Act (RCRA), as outlined in 40 CFR part 263 (Federal Standards for Transporting Hazardous Waste).See <a href="https://www.epa.gov/hw/hazardous-waste-transportation#requirements">https://www.epa.gov/hw/hazardous-waste-transportation#requirements</a></p> <p><u><b>SPECIFIC COMMENTS</b></u></p> <p>The analysis in the EA Chapter 3, Affected Environment and Environmental Consequences, indicates that the proposed action (building components of the PTA FIP) would not have a significant effect on the natural or human environment, therefore an EIS is not warranted. The evaluation of “<i>long-term environmental impacts of military actions, statewide, nationwide, and worldwide</i>” is beyond the scope of this EA.</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact | Date | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|     |                         |              |      | <p>review of the foreseeable projects, the proposed action will have less than significant cumulative effects on the relevant resource areas...” <i>EA p. 4-11</i><br/><i>The Army can’t have it both ways. A full EIS is required to evaluate the cascading impacts of upgrading PTA facilities.</i></p> <p><b>2 Description of the Proposed Action and Alternatives</b><br/><b>2.1 Proposed Action</b><br/>The implementation of the PTA FIP [Facilities Improvement Plan] is estimated to cost \$210 million and to occur over an eight-year period (FY16-FY23), subject to funding availability. <i>p. 2-1</i><br/><i>Why is there always money for new projects, but not to clean up hazardous former military sites?</i><br/><i>When I ask military representatives, they complain that Congress fails to allocate the funds. But how many resources does the military commit to lobbying for cleanup funds, versus lobbying for expansion funds?</i></p> <p><b>2.3 Alternatives Carried Forward for Analysis</b><br/><b>2.3.2 Facilities Improvement Program (Preferred Alternative)</b><br/><b>2.3.2.2. Utility Improvements (Not Part of Proposed Action)</b><br/><u>Wastewater</u><br/>The project area is served by an aging sewer system that is in the process of being replaced by individual wastewater systems (IWSs). The FIP includes seven septic tanks and seven absorption beds...New sewer lines and manholes will be installed within the existing roadways. New sewer laterals will be connected to each building where wastewater is generated. <i>p. 2-8</i><br/><i>Much of PTA is lava rock. Is there enough soil for septic systems? How much ground will be disturbed by digging for a sewer system?</i><br/><i>Is the project designed to accommodate water from a well in the future? If so, the cumulative impacts of development, at Pohakuloa and nearby, from any well need to be evaluated in greater depth than this EA provides.</i></p> <p><i>I also concur with these comments by Mike Reimer:</i><br/><i>“... the cantonment facility is capable of housing 2,300 troops. This is equivalent to a village and merits full-scale waste-water treatment. The aquifer identified by UH studies is relatively shallow and will be subject to receiving leachates of the septic and other drainage-management systems through the porous basalts and possibly toxins carried by the surface drainage control system.</i><br/><i>Thus, this overlooked issue of significant impact must be addressed properly with the requirement of a full waste-water treatment facility and discussed in a full EIS.” E-mail from Mike Reimer to Cory Harden, July 27, 2018</i></p> <p><u>Electrical Lines</u> The existing secondary power system for the cantonment area consists of overhead poles and wires and pole mounted transformers with a few pad-mounted transformers. The proposed changes will essentially convert it to an underground system...<i>p. 2-11</i><br/><i>Much of PTA is lava rock. How difficult will it be, and how much ground will be disturbed, by digging for underground electric?</i></p> <p><b>2.4 Alternatives Considered But Not Carried Forward for Detailed Analysis</b><br/><b>2.4.1 Relocate Out of BAAF Accident Potential Zone</b><br/>One alternative considered was to relocate cantonment activities to the north and south of the area encumbered by the Bradshaw Army Airfield (BAAF) Accident Potential Zone (APZ) and Imaginary Surfaces (but still within project area). The 40:1 Approach Departure surface and 7:1</p> | <p>DoD decisions regarding the allocation of funds are beyond the scope of this EA.</p> <p>Sewer and electrical improvements were approved under separate Records of Categorical Exclusion (RCE). As noted on p. 2-8 (line 27 and 28) of the EA, the State Department of Health has approved the proposed cantonment sewer system concept design. A new well is not included in the Proposed Action but is discussed under Cumulative Impacts. If a well were to be proposed for development, it would need to consider Hawaii Department of Health and Commission of Water Resource Management siting guidelines.</p> <p>See RTC #4 regarding full scale wastewater treatment plant.</p> <p>See RTC #11, Response #1 regarding airfield impacts.</p> |



FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact | Date | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|     |                         |              |      | <p>Transitional surface associated with aircraft operations at BAAF cross through the center of the project area (Figures 1-3 and 2-1) leaving areas to the north and south available for new construction. The project area is also located in Accident Potential Zone (APZ) I (areas at either end of a runway where an aircraft mishap is most likely to occur if one 1 occurs). Most of the buildings and terrain features within the project area penetrate into the imaginary surfaces plane. The cantonment and airfield were constructed prior to adoption of current airfield land use regulations. The land use incompatibility described above is effectively managed by restricting aircraft operations on the east end of the airfield (i.e., restricting approaches and departures over the project area). The limited size and terrain restrictions of the project area make it very difficult to undertake major new phased construction outside of the APZ without significantly affecting Mission Readiness (Screening Factor 3) and the use of SRM [Sustainment, Restoration and Modernization] funds (not available for new construction) (Screening Factor 1). Moreover, the proposed action (modernization of cantonment facilities and infrastructure) is consistent with a permanent waiver granted by the U.S. Army Aeronautical Services Agency dated October 12, 2017, so land use incompatibility is no longer a factor. <i>pp. 2-16 to 2-17</i><br/><i>See comments re. 3.1.1.</i></p> <p><b>3 Affected 1 Environment and Environmental Consequences</b><br/><b>3.1 Land Use Compatibility</b><br/><b>3.1.1 Affected Environment</b><br/>To manage potential aircraft accident risks, take offs and landings over the project area are prohibited; all take offs and landings are toward the west, away from the developed area of the cantonment. The proposed action is consistent with a permanent waiver granted by the US Army Aeronautical Services Agency. <i>p. 3-2</i><br/><i>The EA fails to clearly describe the danger. This could be remedied by including a map like the one at this website: <a href="https://mapcarta.com/24060168">https://mapcarta.com/24060168</a></i><br/><i>Upgrading the cantonment at the existing site will have the impact, far into the future, of perpetuating problematic flying conditions. It appears pilots will be taking off and landing with tailwinds in the afternoons, on top of coping with the effects of high altitude. See below:</i><br/><i>“the prevailing direction of strong winds come from the southeast...”</i><br/><i>Environmental Assessment, Construction of an Urban Close Air Support Range and an Aviation Bulls-Eye Range at Pohakuloa Training Area, Hawaii, December 2013, p. 10</i><br/><i><a href="https://www.mcbhawaii.marines.mil/Portals/114/WebDocuments/UCAS/UCAS_EA%202013_Dec.pdf">https://www.mcbhawaii.marines.mil/Portals/114/WebDocuments/UCAS/UCAS_EA%202013_Dec.pdf</a>, accessed 8-4-18</i><br/><i>“A normal takeoff is one in which the airplane is headed into the wind; there are times that a takeoff with a tail wind is necessary. However, the pilot must consult the POH/AFM [Pilot’s Operating Handbook and/or Airplane Flight Manual] to ensure the aircraft is approved for a takeoff with a tail wind and that there is sufficient performance and runway length for the takeoff.</i><br/><i>Also, the takeoff surfaces are firm and of sufficient length to permit the airplane to gradually accelerate to normal lift-off and climb-out speed, and there are no obstructions along the takeoff path.”</i><br/><i><a href="https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook/media/07_afh_ch5.pdf">https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook/media/07_afh_ch5.pdf</a>, accessed 8-4-18</i><br/><i>“The density of air has significant effects on the aircraft’s performance. As air becomes less dense, it reduces:</i><br/><ul style="list-style-type: none"><li><i>• Power, because the engine takes in less air</i></li><li><i>• Thrust, because the propeller is less efficient in thin air</i></li><li><i>• Lift, because the thin air exerts less force on the airfoils”</i></li></ul></p> | <p>See RTC#10, Response #10 regarding TCPs.<br/>Pacific Consulting Services Inc.’s 2012 evaluation followed the <i>U.S. Department of the Interior National Park Service Guideline for Evaluating and Documenting Traditional Cultural Properties</i> (National Register Bulletin #38), which evaluates the property for eligibility using four basic criteria set forth in the National Register regulations (36 CFR Part 60). They found that no areas within PTA qualified as a TCP under the NPS criteria. This determination does not negate Maly’s statement that many Native Hawaiians may feel a "deep cultural attachment to the broad spectrum of natural and cultural resources" found in and around Mauna Kea.</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

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|     |                         |              |      | <p><a href="https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/13_phak_ch1_1.pdf">https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/13_phak_ch1_1.pdf</a>, p. 11-2</p> <p><b>3.3 Cultural Resources</b><br/><b>3.3.1 Affected Environment</b><br/><b>3.3.1.4. Traditional Cultural Properties</b><br/>Consultants for the PCSI [Pacific Consulting Services, Inc.] study reported the presence of human burial from observation and oral traditions, but did not provide exact locations...Human burials have not occurred at PTA during modern times, and active community burial traditions at PTA have not been identified. Cultural informants also reported the continued use of old trails that crossed PTA... Research conducted by Maly (1997; Maly &amp; Maly, 2005) involved interviews that considered Mauna Kea and associated the landscapes and view planes. The researchers surmised that Native Hawaiians may feel a "deep cultural attachment to the broad spectrum of natural and cultural resources" found in and around Mauna Kea (Maly 1999, 3) and recommended that the traditions, sites, practices, and continuing significance of Mauna Kea make it "eligible for nomination as a traditional cultural property under federal law and policies" (Maly 1999, 3 cited in US Army Environmental Command 2013a). As noted above, subsequent work by Pacific Consulting Services, Inc. (PCSI, 2012) concluded that no areas within PTA appear to qualify for consideration as TCPs under U.S. National Park Service (NPS) criteria.<br/>Archaeological resources: To-date, there are over 1,200 recorded archaeological sites at PTA, including at the KMA. These include prehistoric Native Hawaiian sites... p. 3-8<br/><i>Why do no areas qualify as traditional cultural properties, despite human burials, old trails, over 1,200 archaeological sites, and people having “deep cultural attachment to the broad spectrum of natural and cultural resources”?</i><br/><i>Why was PCSI hired for further evaluation of TCP status? Was the Army reluctant to accept Maly's conclusion that a TCP existed?</i><br/><i>Note that destruction of many significant sites in the impact area has probably been going on with no mitigation throughout PTA's history.</i><br/><i>Note also that several people, myself included, were shut out of a recent State Historic Preservation meeting in Hilo where some of the issues above may have been explored.</i></p> <p><b>3.4 Biological Resources</b><br/><b>3.4.2 Environmental Consequences</b><br/><i>A complete EIS should be done to evaluate severe impacts to biological resources from future actions that will be enabled by cantonment improvements. For example, re. fire risks: “Flares released by the UH-1Y and AH-1Z helicopters apparently ignited grass within an environmentally protected area...” Fire sparked during RIMPAC exercises consumes 2,000 acres, West Hawaii Today, July 19, 2018, <a href="http://www.westhawaii.com/2018/07/19/hawaiiinews/fire-sparked-during-rimpac-exercises-consumes-2000-acres/">http://www.westhawaii.com/2018/07/19/hawaiiinews/fire-sparked-during-rimpac-exercises-consumes-2000-acres/</a>, accessed 8-5-18</i><br/><i>“A range fire that began March 24 within the Pohakuloa Training Area (PTA) on Hawaii island during a combined armed live-fire exercise is contained but still smoldering near Range 3 in the PTA impact area...” Pohakuloa fire not a threat to community, PTA officials say, Hawaii Independent, April 1, 2016, <a href="http://hawaiiindependent.net/story/pohakuloa-fire-not-a-threat-tocommunity-pta-officials-say">http://hawaiiindependent.net/story/pohakuloa-fire-not-a-threat-tocommunity-pta-officials-say</a>, accessed 8-5-18</i></p> <p><b>3.8 Water Resources</b><br/><b>3.8.1 Affected Environment</b><br/>In 2015, UH researchers developed a successful test well within the PTA cantonment and encountered an aquifer that began at an elevation of about 4,600 feet above sea level (ibid). UH</p> | <p>See RTC# 10 Response #1 regarding need for EIS. The proposed action does not impact PTA training activities (including RIMPAC) or any fire risks associated with current or future training activities. They are beyond the scope of this EA.</p> <p>See response to Section 2.3.2.2. above and RTC #4.</p> <p>The proposed action is limited to the replacement of buildings within the PTA cantonment, with no impact on the frequency or tempo of training activities such as RIMPAC. The replacement of buildings in the PTA cantonment has no impact on the occurrence of human trafficking or the cost of housing. Although human trafficking and elevated housing costs are serious issues that do have a disproportionate impact on low income and minority groups, they are beyond the scope of this EA.</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact | Date | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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|     |                         |              |      | <p>researchers are drilling additional test wells to establish the extent of the groundwater resource. A developable groundwater resource in the Saddle Area would benefit the Army, which currently spends approximately \$0.9 million/year to truck water to PTA from a Hawaii County Department of Water Supply source in Waimea, as well as expanding the range of options available for the DHHL’s Humuula/Piihonua lands to the east of PTA...</p> <p><i>See comments re. 2.3.2.2.</i></p> <p><b><u>3.10 Socioeconomics</u></b><br/>3.10.2 Environmental Consequences<br/>There would be no socioeconomic impact in the operational period...<i>p. 3-25</i><br/>There would be no disproportionately high and adverse impacts on low-income or minority groups from construction and operation of the preferred alternative. <i>pp. 3-25 to 3-26</i><br/><i>The EA should analyze impacts from human trafficking and elevated housing costs. See news clips below.</i><br/><i>Human trafficking</i><br/><i>“...the Hawaii State Commission on the Status of Women at the Department of Human Services launched its first anti-trafficking campaign to coincide with RIMPAC. The “She is All Women” campaign aims to bring attention to the outsized demand for prostitution in Hawaii — a demand met in part by sex trafficking, and that surges during RIMPAC. Major events such as RIMPAC create a significant risk of commercial sexual exploitation to women and girls in Hawaii. The Commission is especially concerned for runaway youth, Native Hawaiian, immigrant, and LGBTQ persons, who are at an elevated risk of the predictive factors for prostitution and sex trafficking...</i><br/><i>Places with a large military presence often see higher rates of violence against women as a result of a larger process of normalized violence. According to the Sex Trafficking Intervention and Research at Arizona State University, Hawai’i has one of the worst demand problems in the America and a large number of buyers are on its military bases.”</i><br/><i>Hawaii State Commission On The Status Of Women Launches Anti-Trafficking Campaign, July 10, 2018, <a href="http://humanservices.hawaii.gov/blog/hawaii-state-commission-on-the-status-ofwomen">http://humanservices.hawaii.gov/blog/hawaii-state-commission-on-the-status-ofwomen</a> launches-anti-trafficking-campaign/, accessed 8-4-18</i><br/><i>Housing costs</i><br/><i>“They're in our communities every day, the men and women who serve our country. They live here in a place where homes are limited and rent keeps rising. Part of the blame is being put right back on them and the money they get from the government for housing.</i><br/><i>"I would say it does impact the cost and right now the demand is high and strong and these individuals who do get that extra allotment each month it is to their advantage," Sen. Will Espero -(D) Senate Housing Chairperson said..."In general, the impact of 5-to-10 percent. That's a significant amount of units in the aggregate," [Real estate analyst] Cassidy said...</i><br/><i>"It's negative that there's more competition and potentially pushing people out in certain areas and certain price ranges but the benefits would be they sit here they protect the country they contribute a heck of a lot of money to our economy and therefore there's a ton of jobs and incomes that are tied to that," Cassidy said.”</i><br/><i>How the military impacts rent prices in Hawaii, Posted: Feb 23, 2017 Updated: Mar 16, 2017, KITV news, <a href="http://www.kitv.com/story/3459177/how-the-military-impacts-rent-prices-in-hawai">http://www.kitv.com/story/3459177/how-the-military-impacts-rent-prices-in-hawai</a></i></p> <p><b>3.9 Public Facilities and Infrastructure</b><br/><b>3.9.2 Environmental Consequences</b> <i>p. 3-24</i><br/><i>The EA should evaluate mitigation measures such as a runway truck ramp to reduce the risk from construction trucks, especially those carrying hazardous materials, on Saddle Road. This highspeed, multi-lane highway ends at a stop sign where several crashes have occurred.</i></p> | <p><b>Section 3.9 Public Facilities and Infrastructure</b><br/>Construction of a runaway truck ramp on the Daniel K. Inouye Highway would be under the purview of the State Department of Transportation (HDOT).</p> <p><b>Section 3.12 Toxic and Hazardous Substances.</b><br/>During the construction period, some hazardous waste (e.g., demolition debris with asbestos containing material and lead based paint) will need to be transported for disposal. Transporters of hazardous waste must comply with applicable regulations under the Resource Conservation and Recovery Act (RCRA), as outlined in 40 CFR part 263 (Federal Standards for Transporting Hazardous Waste).See <a href="https://www.epa.gov/hw/hazardous-waste-transportation#requirements">https://www.epa.gov/hw/hazardous-waste-transportation#requirements</a>.</p> <p><b>Section 4 Cumulative Impacts</b><br/>The EA (Section 4) discusses past, present and reasonably foreseeable future actions at or near the project area which, in combination with the proposed action, could have a cumulative impact on the environment. The proposed action is limited to modernization and replacement of existing facilities in the cantonment, and is independent of training activities taking place at PTA range areas. Chapter 3 of the EA does address the project impacts for several of the issues you cite—erosion (Section 3.6) impacts to native species (Section 3.4), and Hawaiian culture (Section 3.3). Brush fires may be related to range activities, but the project will not affect range activities or the frequency of training. Evaluation of lost opportunities for alternative land uses (agriculture, recreation, housing, commercial activity, etc.) is beyond the scope of this EA. Evaluation of impacts from former military sites on Hawaii with UXO and other hazards are beyond the scope of this EA.</p> <p><b>Appendix B, Section 7 ESA Consultation</b><br/>Formal consultation in accordance with Section 7 of the Endangered Species Act was not warranted and is not required. The Section 7 consultation process typically begins as an “informal consultation” with the USFWS and identification of listed species that may occur in</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact     | Date                      | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Response                                                                                                                                                                                                                                                                                                                                                                         |
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|     |                         |                  |                           | <p><b>3.12 Toxic and Hazardous Substances</b><br/><b>3.12.1 Affected Environment</b><br/>ACMs [asbestos containing materials] were identified in some of the buildings in cement board, mortars, and joint compounds. LBP [lead based paint] was commonly encountered. <i>P. 3-19</i><br/><i>The EA should identify measures to protect the public when hazardous materials are transported on Saddle Road for disposal.</i></p> <p><b>4 Cumulative Impacts</b><br/><b>Table 4-1 Past, Present, and Reasonably Foreseeable Future Actions p. 4-3</b><br/><i>The EA should describe and evaluate negative impacts from past, present, and future actions at PTA—erosion, fires, impacts to native species and native Hawaiian culture, lost opportunities to use this land for agriculture, recreation, housing, commercial activity, etc. The cantonment project will facilitate future PTA actions for years to come.</i><br/><i>The EA should describe and evaluate impacts from numerous former military sites on Hawaii Island left in hazardous condition for decades. The sites contain unexploded ordnance and other hazards.</i></p> <p><b>APPENDIX B</b><br/><b>Section 7, Endangered Species Act Consultation</b><br/>U.S. Department of the Interior, Fish and Wildlife Service Letter to USAG Pohakuloa dated September 28, 2016<br/>Subject: Informal Consultation for Pohakuloa Training Area Facilities Improvement Program<br/><i>PDF p. 167</i><br/><i>Was a formal consultation ever done, and is it required?</i></p> | the area. If the federal agency, after discussions with the USFWS, determines that the proposed action is “not likely to adversely affect” any listed species in the project area, the consultation process is complete. The Army determined and the USFWS concurred that the PTA FIP was not likely to adversely affect listed species (correspondence provided in Appendix B). |
| 14  | Individual              | Gary Harrold     | Email dated 5 August 2018 | My family, friends & colleagues want a full EIS on the proposed \$210 million building project at PTA. We live downwind from the depleted uranium oxide dust, which is harmful to our aging immune systems. PTA is a toxic waste dump after 75 years of bombing and live-fire, mix of chemicals including Depleted Uranium (DU) radiation. Military is famous for not cleaning up their UXO, water contamination of Pearl Harbor, debris on the ocean floor, radiation and leaking fuel tanks at Red Hill. Time to be sensitive to Mother Earth. She is sacred.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | See RTC#10 Response #1 regarding need for EIS and RTC #4 regarding DU.                                                                                                                                                                                                                                                                                                           |
| 15  | Individual              | Chris McCullough | Email dated 6 August 2018 | As the current President of the Landscape Industry Council of Hawaii (LICH) and a Board member of the Hawaii Island Landscape Association (HILA), and as well a 35 year resident of the Hawaiian islands (17 years on Hawaii island) I request and call for a Full Environmental Impact Statement (EIS) to be performed for the proposed \$210 million building project at PTA. It is my belief that PTA is a toxic waste dump after 75 years of bombing and live-fire, with a toxic stew of chemicals used, including Depleted Uranium (DU) radiation. Given this reality it should be assumed there may likely be extensive contamination in the proposed demolition and construction area. After all, while PTA has a designated "Impact Area" its maps of PTA say "WARNING: ALL OF PTA IS CONSIDERED A DU HAZARD AREA."<br>In simple terms, whatever was used anywhere on the base should be considered in the proposed construction area. Nothing in the current EA addresses the wide range of military toxins, including radioactive Depleted Uranium oxide particles (DU oxide) which have been used in the 75 years of bombing and other live-fire at PTA. There needs to be comprehensive, independent testing and monitoring for DU oxide and other military toxins at these PTA buildings which are adjacent to the newly improved Saddle Rd, and for all areas that are contaminated and hazardous.                                                                                                                         | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.<br><br>The proposed action is independent of range training activities (i.e., training activities will continue whether or not the FIP is approved), with no change in cantonment use.                                                                                                                   |



FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact                                | Date                      | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Response                                                                                                                                                                                                                                |
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|     |                         |                                             |                           | <p>I will go much farther. It is likely off the base as well, at Mauna Kea State Park in the children’s playground, at the nearby Girl Scout Camp, into and on all the vehicles that daily use the Daniel K. Inouye (Saddle Road) highway and downwind --north, south, east and west, depending on the wind conditions of the day. Every time live fire testing takes place at PTA the United States Army puts our community at risk, in harm’s way of DU exposure, of whichever way the wind is blowing. We have confirmed this during live fire periods with our own radiation monitoring equipment that has detected radiation spikes well above background radiation levels both at the PTA main entry gate and outside PTA on many occasions, including Mauna Kea Park, where many who travel the improved Saddle Road stop for picnics, use the restrooms and the children’s play area. DU has a half-life of 4.5 billion years. Once inhaled DU oxide particles stay in the body for decades. High Explosives turns DU metal into DU oxide dust particles that can be carried long distances by the wind and when inhaled is the most deadly form of radiation (causing cancers and genetic damage) according to Dr. Lorrin Pang, MD, MPH who spent 24 years in the Army Medical Corps. The time has come for the United States military to acknowledge its error and its responsibility for DU in our Hawaii island environment and take immediate measures to mitigate possible risk to our Hawaii island community.</p> <p>The statement on page vii of the executive summary which says "Employment of personnel qualified to identify and handle hazardous materials if unexpectedly encountered" shows the disconnect from reality of the approach to this demolition and construction project. It is NOT "unexpectedly encountered." It is expectedly encountered. And I request and call for a more comprehensive look at the matter be made through a full EIS.</p> <p>‘Freedom is not free’, is a justification we often hear from our military, and yes, a strong military is important and soldiers must be trained. But in the case of PTA the time has come for the United States Army to acknowledge it’s errors and negligence and accept its responsibility in the risk it creates for the citizens of Hawaii island. The time is long overdue for the United States Army to take steps to remedy this dangerous situation immediately, for our children and our future generations.</p> <p>For my own Grandson I will not accept anything less.</p> |                                                                                                                                                                                                                                         |
| 16  | Individual              | Joan Lander                                 | Email dated 6 August 2018 | I feel a complete EIS is required. So much has happened around that site over the decades that has never been studied. For the safety of both military personnel and residents of Hawaii island, and for protection of our air and water sources, there should finally be a comprehensive look at the state of the environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.                                                                                                                                                                 |
| 17  | Individual              | Patricia Ikeda                              | Email dated 6 August 2018 | PTA is a toxic environment caused by years of bombing and live fire, which includes DU. Proposed building project is extensively contaminated and requires a full EIS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.<br><br>All hazardous materials encountered during construction will be identified, removed, handled and disposed in accordance with all applicable regulations. |
| 18  | Individual              | Claire Loprinzi<br>Traditional Practitioner | Email dated 6 August 2018 | <p>There is a great importance that the EA for planned construction at the Training Center at Pohakuloa be replaced with a more thorough EIS. For many reasons, Pohakuloa is kapu aloha and should never have war machines, trainings etc on it. The training center is one of the top 10 polluters in Hawaii. It disseminates an average of 300 pounds of persistent biological toxins per day into the environment, primarily lead. It has a history of dispersing depleted uranium into the environment which many folks including physicians have in detail spoken out about. The training center also polluted and disrespected the local environment and community by continuing to utilizing a large capacity cesspool with the potential to pollute our ground water after being notified and fined by the EPA. It is your kuleana to do a EIS which also includes section 106 since it is a burial grounds for Hawaiians.</p> <p>We expect better that trying to just move a EA through. It is interesting because in Olelo Hawaii EA means sovereignty, and this destruction and disrespect. Do better this is the piko of Hawaii Nei.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.                                                                                                                                                                 |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact                                                                   | Date                      | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| 19  | Individual              | Joseph Kassel, N.D. L.Ac.                                                      |                           | Importance that the EA be replaced with a more thorough EIS. Training center is one of the top 10 polluters in Hawaii, disseminates an average of 300 pounds of persistent biological toxins per day into the environment, primarily lead. It has a history of dispersing depleted uranium into environment which as shrouded in denial and disinformation and left local community suspicious, concerned and distrusting. Training center also polluted by continuing to use large capacity cesspool with potential to pollute ground water after being notified and fined by the EPA. DOD has the dubious distinction of being the world's largest institutional polluter. Require a forthright in depth EIS for any construction projects at the training center.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 20  | Individual              | Jim Albertini                                                                  |                           | <p><b><i>Continuation of comment letter #11</i></b></p> <p><b>Fires, endangered species, wasteland.</b> Cites 2 newspaper articles: <i>“Flares released by the UH-1Y and AH-1Z helicopters apparently ignited grass within an environmentally protected area...” Fire sparked during RIMPAC exercises consumes 2,000 acres...”</i></p> <p><i>“A range fire that began March 24 within the Pohakuloa Training Area (PTA) on Hawaii island during a combined armed live-fire exercise is contained but still smoldering near Range 3 in the PTA impact area...” Pohakuloa fire not a threat to community, PTA officials say...”</i></p> <p>As far as I am aware, NO air monitoring has ever been done during PTA fires to see what is blowing in the smoke and the wind. The maps of all fires on PTA should be included in a full EIS, including the most recent fire of only a few weeks ago that burned "an environmentally protected area." What species were in the area that burned?</p> <p>Propose that the \$210 million proposed for demolition and rebuilding of PTA cantonment be used as down payment for billions (likely tens of billions) of dollars that will be needed to clean up PTA of its toxic stew. Example: Former 120,000 acre Waikoloa live-fire area which was used for only 2 years during WWII now is estimated to cost \$760 million to clean up. Only \$5-10/yr is being appropriated. At the present rate that will take 70-150 years to complete and the true cost is likely to mushroom. Pohakuloa is 133,000-acres and has been used for 75 years of bombing and is contaminated with Radioactive Depleted Uranium oxide particles and a host of other chemicals.</p> <p>We don't need new cantonment area to protect us. We as residents of the Big island are like the species in the "environmentally protected area" recently burned. We need a military EXIT plan, and money to assure clean up. Recently Congress passed a \$717 billion military budget, but how much of that money is for clean up? There is always plenty of money for military to makes mess after mess, but never enough money for cleanup. There are at least 57 present or former military sites on this island in need of clean up. When will these sites be cleaned up. Do this clean up before you even consider new building for further destruction.</p> <p>The US military is the greatest polluter on the planet. Do complete EIS on Pohakuloa and include decommissioning and cleanup costs.</p> | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU. The proposed action is independent of range training activities (i.e., training activities will continue whether or not the FIP is approved).                                                                                                                                                                                                                                                                     |
| 21  | Individual              | Ohana Ho ‘opakele, native Hawaiian organization<br>Ronald Fujiyoshi, Treasurer | Email dated 7 August 2018 | <p>Ohana Ho`opakele, a native Hawaiian organization, feels that the Environmental Assessment (EA) is wholly inadequate for the following reasons:</p> <p>1. There is no mention of the dangers of Depleted Uranium (DU) oxide at all. It has been documented by Dr. Lorrin Pang M.D. of the danger of Depleted Uranium oxide and this has been made known to the authorities at the Pohakuloa Training Area (PTA) through letters, email, flyers and even on signs held in front of the PTA gate, yet this document does not even acknowledge this in this report. A discussion on the dangers of DU oxide should be included either under “Air quality” or “Toxic and Hazardous Substances.”</p> <p>2. Although the study does mention a University of Hawaii (UH) Humuula Saddle Hydrologic Study Project in 2012 it does not mention the contaminants found in the water from the test well sites. The EA acknowledges that the area is known to flood. Thus, this EA must show that the water table will NOT be further contaminated due to the building of this project.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p><b>Comment #1.</b> See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU</p> <p><b>Comment #2.</b> See RTC #11 Response #6 - The EA (Section 3.8) states that the project does not include new wells so there is no impact on groundwater resources. As described in the EA, the FIP involves some drainage improvements to minimize flooding occurring to existing buildings, essentially restoring the functionality of the original engineered drainage system</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact   | Date                      | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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|     |                         |                |                           | <p>3. Julie Tomia acknowledged that most of the PTA has not been surveyed. Until the total area is surveyed, the study CANNOT claim “it is reasonable to conclude that the unsurveyed areas do not contain historic properties” as stated on p. 3-7, especially when a lava tube shelter is acknowledged to be in this 80 acre area for the project.</p> <p>4. There has no study been done on the psychological impacts to native Hawaiians caused by destruction of their cultural, traditional and sacred sites. Although the EA mentions that a total of 32,330 personnel in 2009 participated in activities on the PTA, the EA does not mention how many are native Hawaiians. How many native Hawaiians will be involved in working on the sites, constructing the project, how many native Hawaiian personnel work on the PTA regularly and how many native Hawaiian military will participate in activities on the PTA over the eight-year period of this project.</p> <p>5. Although the Thirty Meter Telescope (TMT) is mentioned under “Cumulative Impacts” there is no mention of the impact of the native Hawaiians who have opposed the TMT on Mauna Kea and whether this will have an impact of this project at the PTA. We challenge the simple statement included in this study that says, “The Mauna Kea summit is considered a sacred place by many native Hawaiians.” Many native Hawaiians consider the whole Mauna Kea “sacred”, not just the summit. Puu Pohakuloa is on Mauna Kea. Puu Pohakuloa is in the Ahupuaa of Kaohe, in the district of Hamakua. This whole Ahupuaa was considered property of Kaahumanu before it became “Government Lands” under the Mahele. What is the cumulative impact of using this land to native Hawaiians. At the least, there should be a discussion of this under “Cumulative Impacts” like there was for the TMT.</p> <p>6. Why did no native Hawaiian NGOs respond to this draft EA? There were many native Hawaiians who joined in two demonstrations against RIMPAC at the front gate of the PTA on June 30, 2018 and August 1, 2018. The new Commanding Officer of the PTA came out to talk with the demonstrators and even introduced his native Hawaiian spouse to the demonstrators. Why were these native Hawaiians NOT invited to respond to this draft EA? For these reasons, Ohana Ho`opakele requests that a full Environmental Impact Statement (EIS) be required of this project.</p> <p>Mahalo for allowing us to comment on this draft EA and FONSI!</p> | <p>constructed 60 years ago. It is limited to the 80-acre area of the cantonment and will not change the quantity of stormwater leaving the project area.</p> <p><b>Comment #3.</b> The cantonment area has been surveyed far more intensely than the larger range areas. As described in the EA (Section 3.3.1.3), there have been a number of archaeological surveys within the cantonment (including the project area) supervised by the PTA Cultural Management Office (CRO), and archaeological monitoring has been done for several other projects. Due to the random sampling of the cantonment during the course of these projects and the consistency of soils across the areas, it is reasonable to conclude that the unsurveyed areas do not contain historic properties. The State Historic Preservation Officer concurred with this finding (Appendix A correspondence). In the event that inadvertent finds are encountered during the project, work will be stopped and the SHPD consulted for further action.</p> <p><b>Comment #4.</b> This is beyond the scope of the EA. Your comments are acknowledged and part of record. The reference in the EA to “32,330 personnel” represents total Army personnel in Hawaii in 2009, as reported by RAND 2011 – including civilians. Annual levels of Soldiers training at PTA are far less than this number.</p> <p><b>Comment #5.</b> The FNSI will note the perspective that many native Hawaiians consider the whole Mauna Kea sacred, not just the summit.</p> <p><b>Comment #6.</b> Native Hawaiian Organizations (NHO) were consulted as part of the National Historic Preservation Act Section 106 process (see correspondence in Appendix A). The PTA FIP EA and draft Finding of No Significant Impact (FNSI) were made available for a 30-day public review and comment period on July 8, 2018, with the publication of a Notice of Availability (NOA) in the Hawaii Tribune-Herald and West Hawaii Today newspapers. USAG-HI issued a Media Release on July 9<sup>th</sup> as well. Front page newspaper articles describing the proposed action and public comment period were published on July 11, 2018 (Honolulu Star Advertiser) and July 13, 2018 (Hawaii Tribune Herald and West Hawaii Today). An electronic copy of the EA and Draft FNSI was made available for download at <a href="http://www.garrison.hawaii.army.mil/NEPA/NEPA.htm">http://www.garrison.hawaii.army.mil/NEPA/NEPA.htm</a> and copies were also made available for public review at the Hilo, Kailua-Kona, and Waimea public libraries, and the Hawaii State Library on Oahu. Since it’s not necessary to disclose affiliation in providing comments on draft EAs, its possible undisclosed NHO’s provided comments. The Army feels it provided appropriate notice and time for the public (including NHO’s) to submit written comments.</p> |
| 22  | Individual              | Virginia Beck  | Email dated 7 August 2018 | <p>I would like to see a Full Environmental Impact Statement (EIS) on the entire actions at PTA and not just the proposed building project. I am concerned about the lack of clean up to what has already been done on and to the land.</p> <p>Additionally, I agree with calls for a comprehensive, independent assessment of contaminants in the proposed construction area prior to demolition and construction.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>See RTC #10 Response #1 regarding need for EIS.</p> <p>All hazardous materials encountered during construction will be identified, removed, handled and disposed in accordance with all applicable regulations.</p> <p>Please see RTC #4 for a related discussion.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| 23  | Individual              | Michael Reimer | Email dated 7 August 2018 | <p><b>Continuation of comment #4</b></p> <p><b>7. Impact of fire suppression systems at PTA cantonment area.</b></p> <p>An issue concerning proper fire protection is germane to the EA for the overall impact it would have for itself and on other issues and does not appear to have been included in the EA. This</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p><b>Comment #7.</b></p> <p>Cantonment building and utility improvements will include building sprinklers, a fire hydrant system and adequate fire suppression systems. New construction will be in accordance with federal Unified Facilities Criteria including related fire code requirements. The PTA Fire</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

# FNSI Appendix

## USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact                     | Date                                               | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Response                                                                                                                                                                                                                                                                                                                                                                                     |
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|     |                         |                                  |                                                    | would properly be discussed with other water issues contained in the EA specifically potable water and waste water treatment and drainage.<br>Fires frequently occur from the military activities, one as recently as last month, triggered by a flare during RIMPAC exercises. Over 2,000 acres (over 3 square miles) burned in an environmentally protected area. Is the new cantonment area adequately protected? Is there a fire hydrant system in place or planned for the construction? Are there fire breaks as part of the construction that need to be addressed as part of the EA? Are there sprinkler systems? Is there an immediate and adequate water supply say on the order of 100,000 gallons for fire-fighting efforts? Is there adequate first fire-responder personnel and equipment?                                                              | Department is headquartered in the cantonment and is prepared to respond to emergencies within PTA and regularly coordinates with the Hawaii County Fire Department in regional emergencies. Range activities, such as the incident reported, are not part of the cantonment FIP project.                                                                                                    |
| 24  | Individual              | James Bond<br>MCAS Ewa historian | Email dated 7<br>August 2018                       | Please keep me informed about this project and the possible removal of the PTA Quonset huts. We would like to see reuse of some of them on a WW-II era project on Oahu.<br>Some of these Quonset huts may have come from Camp Tarawa in Waimea or MCAS Ewa on O‘ahu which was closed in 1949 and Quonset huts dismantled through 1955.<br>Most of the building stock at PTA consists of Quonset huts, though there are also a few wood frame structures. Approximately 60% of the Quonset huts were erected between 1955 and 1961, relocated from other sites around the Pacific. Given that the manufacture dates of the Quonset huts are generally a decade or more prior to their arrival at PTA, it is highly likely that they were previously used at other locations. Only a small fraction of the Quonset huts have been demolished during the past ten years. | The selected construction contractor will be responsible for removal and disposition of the PTA Quonset huts. We suggest that you get in touch directly with the contractor, once one is selected. The USAG-PTA Public Affairs Officer (808) 969-3340 can put you in touch with the construction contractor at the appropriate time.                                                         |
| 25  | Individual              | Carol Stevenson, DrPH            | Transmitted<br>via Email<br>dated 7 August<br>2018 | This testimony is submitted in support of a full Environmental Impact Statement being completed prior to initiating the proposed \$210 million Construction Project proposed for Pohakuloa Training Area.<br>It must be assumed that the proposed project has a high probability of spreading DU (Depleted Uranium) not only within Pohakuloa Training Area, but also to neighboring or down-wind areas off-base, such as the Girl Scout Camp and Mauna Kea Park, where families in vehicles using the Saddle Road can be exposed to negative health impacts of being exposed to DU.<br>It is unconscionable for such a construction project to be carried out without a prior Environmental Impact Statement (EIS) to mitigate potential negative health impacts.                                                                                                    | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.<br>.                                                                                                                                                                                                                                                                                                                 |
| 26  | Individual              | Phaethon Keeney                  | Email dated 7<br>August 2018                       | Aloha! Please conduct a full EIS on proposed Pohakuloa construction project. The public welcomes this opportunity to look further into the claims of safety and/or contamination in the area related to decades of bombing and live fire which included use of chemicals known to be toxic as well as depleted uranium. It does seem reasonable and prudent to clarify this matter for all parties before going forward with construction. We the public are concerned for the health and safety of our community and would prefer to save taxpayer money in the long run by proactively avoiding further issues and complications, thank you                                                                                                                                                                                                                         | See RTC #10 regarding the need for an EIS and RTC #4 regarding DU.                                                                                                                                                                                                                                                                                                                           |
| 27  | Individual              | Danny H.C. Li<br>Kea’au          | Email dated 7<br>August 2018                       | Entire draft EA process is moot, since the US government has no legal status on Hawaiian lands or waters. Under international law, Hawaii has been under U.S. occupation since the 1893 illegal overthrow. U.S. has consistently refused to present its claim of a legal transfer of sovereignty by then Hawaiian Kingdom to the U.S. government in International Court of Justice. Therefore, it cannot unilaterally decide on any land use issues because it has no legal jurisdiction. Hawaii residents not bound to follow the arbitrary rules and proceedings of the occupying army. It’s time to renounce the illegal occupation. Only legally binding option is to A) clean up the toxic wastes left by the occupying army, B) pay the negotiated reparations, and then C) pack up and leave these islands.                                                    | Noted                                                                                                                                                                                                                                                                                                                                                                                        |
| 28  | Individual              | Sparky Rodrigues                 |                                                    | 1) Flawed study, omissions and impacts need for PEER REVIEW<br><br>2) Limited scope of EA segmented and does not address cumulative impacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Comment #1.</b> The NEPA process that has been followed for this project provides for peer review of technical and scientific reports (e.g., archaeological and biological studies, ) through standard review by federal and state regulatory agencies (e.g., U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, National Park Service, State Historic Preservation Division). |



FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact | Date | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|     |                         |              |      | <p>3) EIS for entire Pohakuloa expanding military activities and impacts</p> <p>4) FONSI or less than significant impact is inaccurate and deceiving, PTA area development plan and the draft real property master plan devalues and forever destroys Hawaii’s natural resources, socioeconomic damage and Endangered species critical habitat</p> <p>5) Construction sites, Historic archeology above or sub levels review Not considered in 1950s ground disturbances to update and upgrade for expansion. ALL Past and current resource destruction needs to be valued in dollars to assess levels lost of history to current value to be compensated.</p> <p>6 Major unresolved issue is the USA occupation of Hawaii with military troops constantly demonstrating and threatening a peaceful nation and peoples with military might.</p> <p>7) Lands consideration are based on STATE LEASE or fee to military and illegally acquired by purchased land sales made under duress.</p> <p>8) State of Hawaii historic preservation officer, US fish and wildlife, Hawaii dept of health, coastal zone management program Hawaii support have been bullied and deceived as the total impact and cumulative impacts contribution of this action. Total negative impacts to the area and people of Hawaii remain irreparable.</p> <p>9) Areas of impacts – land use compatibility in conflict with Kingdom of Hawaii laws, forever lost of cultural resources, increased noise provided by housing large numbers of troops and related activities. Pollution contribution by related activities this EA supports to air, water and soil. Socioeconomic damage contribution to PTSD of Native Hawaiians, endangered species and critical habitats. Continued contribution of toxic and hazardous substances by activities these facilities will support.</p> <p>10) My preferred action in total removal of ALL PTA facilities, clean up ALL UXO, decontaminate all DU, toxic and hazardous elements related to ALL military activities. Compensation for lost use of lands occupied, compensation to restore all environmental damage, compensation for all damaged and destroyed archeological sites, relics and Hawaiian objects. Termination of any/ALL lease holdings. Return of all lands and facilities clamed in lease or fee to the Kingdom of Hawaii</p> | <p><b>Comment #2.</b> The proposed action (cantonment FIP building improvements) is part of an overall Facilities Improvement Program that also includes utility (water, sewer, drainage) improvements. The utility improvements were approved and are proceeding under Records of Environmental Consideration (REC). However, the utility and building components of the FIP have independent utility, and are therefore not considered segmented actions. The Council on Environmental Quality (CEQ),which has rules against project segmentation, states that actions are "connected" if:</p> <p>a) they automatically trigger other actions which may require EIS</p> <p>b) cannot or will not proceed unless other actions are taken previously or simultaneously, and</p> <p>c) they are interdependent parts of a larger action and depend on the larger action for their justification.</p> <p>Although the building improvements and utility improvements are part of overall cantonment upgrades, one does not automatically trigger the other. Although not a desired condition, it is possible that either one could be implemented independently, with no requirement to construct the other. Cumulative Impacts were analyzed in Section 4.</p> <p><b>Comment #3.</b> The proposed action is independent of range training activities (i.e., training activities will continue whether or not the FIP is approved).</p> <p><b>Comment #4</b> The proposed action is limited to the building components of the Facilities Improvement Program. The cumulative impacts section of the EA addresses a broad range of activities and actions that are considered and assessed in conjunction with the proposed action to ensure incremental effects are accounted for.</p> <p><b>Comment #5.</b> As noted in RTC # 21 response #3, the proposed construction area within the cantonment has been well surveyed and is not likely to contain historic properties.</p> <p><b>Comments # 6-7.</b> This is not within the scope of this project or this EA.</p> <p><b>Comments #8-9.</b> We are unable to respond, as no documentation is provided for these statements.</p> <p><b>Comment #10.</b> Your comments are noted and are included in the administrative record for this project.</p> |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact                                             | Date                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|     |                         |                                                          |                              | 11) FULL EIS for the ENTIRE PTA facility and activities to determine current baseline damage and lost attributed by ALL impacts of any future military activities. NO SEGMENTING<br>12) EA and EIS to provide funding to community for PEER reviews conducted by agreed upon experts not affiliated or connected to military influences.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Comment #11.</b> See response to comment #2 above.<br><br><b>Comment #12.</b> See response to comment #1 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 29  | Individual              | Nancy Redfeather<br>P.O. Box 906<br>Kealakekua, HI 96750 | Email dated 8<br>August 2018 | <p>I would like to make comment on the Environmental Assessment and Draft Finding of No significant action for the U.S. Army Garrison at Pohakuloa on the Island of Hawaii. I have been a resident of Kona for the past 40 years. My family lives on our small farm in the uplands of Kona.</p> <p>The document was interesting in that I was exposed to the various treaties and agreements in place through mostly federal requirements that the Army must follow on lands they occupy and use. Although there are some areas, where you have done work that could be considered public or environmental assets, such as your replanting of native species, I would say overall there are a few comments that I would like to make considering your long term occupation of the central section of the Island of Hawaii.</p> <p>Overall, after reading the document, I have a few comments:</p> <ul style="list-style-type: none"><li>[1] I can see that a thorough evaluation of the potential ancient and historical sites has not been completed. There have been identified 1,198 sites, 822 have not been evaluated, and 364 are traditional Hawaiian sites, and that only 20% of the high impact zone has been evaluated. That no sacred sites were identified seems highly unlikely. This information should have affected the final determination of No Significant Impact.</li><li>[2] While I understand that there has been numerous lava flows as well as 100 years of ranching in the zone, and that a collection of physical artifacts exists that was recovered through surveys, it seems that there very well could be long term impacts to the Island of Hawaii through continued use of the area as a training area for the use and training of various weapon systems. These impacts would include, contamination of the ground water serving communities at lower elevations, contamination of soils from depleted uranium pieces and dust kicked up in the impact zone unknowingly (because you really don't know where all the DU lies) impacting both the soldiers and communities down wind, and the potential for ancient sites which have not yet been surveyed to be destroyed.</li><li>[3] The Hawaii County Council has passed various Resolutions that are also concerned about these potential impacts. Resolution 639-88 urges the military to address the potential hazards of DU at the Pohakuloa Training Area. This Resolution has 8 action areas including ceasing of live fire and cleanup of DU that have not been adequately addressed in the past 9 years.</li><li>[4] The State of Hawaii land lease does not allow for storage of nuclear storage on site, even though the NRC has given Pohakuloa a permit to possess DU on site. The Army has not been transparent with the public about the use of DU coated weapons being used currently on site. IF the Army is not using DU coated weapons and firing them at the Pohakuloa Training Site, you should tell the public. That would make a huge difference in many people's minds of how they view your continued presence here.</li></ul> <p>[5] Under the circumstances a full EIS should be conducted that would adequately address the concerns above. I'm sure I'm not the only person with these concerns, but I can't imagine that you would receive very many public comments, considering the difficulty of gaining access to the report itself.</p> <p>I hope that the new U.S. Army Garrison Commander at Pohakuloa can create a more amiable relationship with the peoples of Hawaii Island, and that you continue to work toward gaining a</p> | <p><b>Comment #1.</b> The EA summarized years of research and consultation conducted by the Army for archaeological research within the cantonment area and determined the proposed action would not adversely affect archeological resources. The Hawaii State Historic Preservation Officer reviewed the documentation provided by the Army and concurred with that determination. This is a limited and focused determination covering the area of potential ground disturbance. See RTC #10 Response #10 regarding traditional cultural places.</p> <p><b>Comment #2.</b> –The Proposed Action (modernizing cantonment facilities) does not affect range training activities (that will continue whether or not the proposed action is implemented). The Army remains committed to continuing to protect the health and safety in surrounding communities, Soldiers and their families, and the civilian work force who live and work at PTA. See RTC #4 for discussion on DU issue.</p> <p><b>Comment #3.</b> See RTC #4</p> <p><b>Comment #4.</b> See RTC #4</p> <p><b>Comment #5.</b> The availability of the EA/Draft FNSI was widely publicized (See Comment #21, response #6)</p> |

# FNSI Appendix

## USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact                                                                     | Date                       | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|     |                         |                                                                                  |                            | deeper understanding of the Hawaiian community’s views and opinions of this culturally sensitive area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 30  | Individual              | Steven Kiown                                                                     | Letter dated               | I am requesting a full EIS. Address the military toxins and radioactive depleted uranium oxide particles used for 75 years of bombing and live fire.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 31  | Individual              | Cynthia Hathaway                                                                 | Email dated 8 August 2018  | As a resident of Big Island Hawaii for 36 years, and a member of the organization Malu'Aina Center for Non-violent Education and Action, I fully support the stance and comments submitted by Jim Albertini.<br>A full Environmental Impact statement on the \$210 million proposed building project at PTA is a must! Please record my comment in your statistics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 32  | Individual              | Shannon Rudolph<br>Holualoa, HI                                                  | Email dated 7 August 2018  | Our organization calls for a Full Environmental Impact Statement (EIS) on the proposed \$210 million building project at PTA. There are lots of things that need more consideration:<br>Our organization believes that PTA is a toxic waste dump after 75 years of bombing and live-fire, with a toxic stew of chemicals used, including Depleted Uranium (DU) radiation. Given this reality it should be assumed there may likely be extensive contamination in the proposed demolition and construction area. After all, while PTA has a designated "Impact Area" its maps of PTA say "WARNING: ALL OF PTA IS CONSIDERED A DUD HAZARD AREA." In simple terms, whatever was used anywhere on the base should be considered in the proposed construction area. I would go much farther. It is likely off the base as well, like Bob Dylan says "blowing in the wind"... at Mauna Kea park in the children’s playground, at the nearby Girl Scout Camp, into and on all the vehicles that use the Daniel K. Inouye (Saddle Road) highway and downwind --north, south, east and west, depending on the wind conditions of the day. The statement on page vii of the executive summary which says "Employment of personnel qualified to identify and handle hazardous materials if unexpectedly encountered" shows the disconnect from reality of the approach to this demolition and construction project. It is NOT "unexpectedly encountered." It is expectedly encountered. And we want a more comprehensive look at the matter through a full EIS. | See RTC #10 Response #1 regarding need for EIS and RTC #4 regarding DU.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 33  | Individual              | Adhann Iwashita, Ph.D.<br>Malu ‘Aina Center for Non-Violent Education and Action | Email dated 7 August 2018  | As written, EA disregards long term historical, present day, and future impacts at Pohakuloa by trivializing all life outside the military endeavor. This includes natural and cultural resources, e.g., archaeological resources, traditional cultural properties, and historical trails, present day human and nonhuman connections with land, water resources, and native and other flora and fauna.<br>If completed seriously, EA would take into account potential impacts of continued military activity including bombing, live fire, and other training activities on the lands at Pohakuloa for all life in the area, within and beyond the cantonment area.<br>To skirt an assessment process designed specifically to counter the mass extinguishment of nonhuman species and damage to the environment as the result of unchecked development and unconscious human activity is to show that the military will continue to wield power and disregard due process as long as it can escape moral accountability by the general public. I should hope that the military, with all its resources and the use of citizens’ tax dollars, would endeavor to be better—lawful, honest, and righteous.                                                                                                                                                                                                                                                                                                                                           | The EA included a thorough review of, and potential for impacts to, natural and cultural resources, including related consultation correspondence associated with the National Historic Preservation Act Section 106 process and the Endangered Species Act Section 7 process. An analysis of broader impacts of training activities at PTA are beyond the scope of the EA. The proposed action is independent of range training activities (i.e., training activities will continue whether or not the FIP is approved). |
| 34  | Individual              | “Stephens"                                                                       | Email dated 7 August 2018  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Email received from “Stephens” with no email message                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 35  | Individual              | Masako E. Ryan                                                                   | Letter dated 8 August 2018 | I was strongly advised to send a letter to you by Mr. Jim Albertini. Mr. Albertini is well respected for his leadership and life-long dedication to social and political cause affecting Hawaii and the country. These include, importantly, the issue of depleted uranium at PTA. Mr. Albertini is increasingly concerned about the issue of depleted uranium (DU) at Pohakuloa Training Area (PTA). According to him, bombing and other live-fire training exercises at PTA have introduced and then disbursed DU over a period of many hears. Even munitions that do not themselves contain DU may disrupt DU-containing soil and make it airborne. This not only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | See RTC #4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

FNSI Appendix  
USAG-HI Public Comment Tracker

| No. | Agency/<br>Organization | Name/Contact | Date | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Response |
|-----|-------------------------|--------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|     |                         |              |      | <p>affects the immediate Saddle Road and PTA area but potentially affects all areas downwind, including the Kailua-Kona region. The Hawaii public, and especially the visiting tourists from across America and around the world are quite unaware of the legacy of DU, and around, PTA. The County of Hawaii has ruled on the issue of DU at PTA and has mandated an assessment and decontamination of the PTA base and surrounding bombing and gunnery ranges (County of Hawaii Resolution of July 2008). To date, to my knowledge, no such assessment or decontamination effort at PTA has been undertaken. Please inform me of any efforts now underway or planned by the PTA administration to address the DU issue</p> <p>It is my strong feeling that the PTA administration must take seriously its responsibility to protect the public health and safety as well as that of the military enlistees who train at PTA. Efforts to spend US taxpayer dollars on yet another renovation to PTA must await a full and thorough remediation of the extensive DU contamination at this site, and set up monitoring and administrative regulations to prevent future reintroduction of DU.</p> |          |



ENVIRONMENTAL ASSESSMENT  
Cantonment Facilities Improvement Program  
POHAKULOA TRAINING AREA, HAWAII ISLAND, HAWAII  
June 2018

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## EXECUTIVE SUMMARY

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ)'s NEPA regulations and Title 32 of the *Code of Federal Regulations* Part 651 (Environmental Effects of Army Actions). The United States Department of the Army ("Army") is the project proponent. The EA analyzes the environmental impacts of implementing a Facilities Improvement Program (FIP) at the Pohakuloa Training Area (PTA) on Hawaii Island. The preferred alternative is to implement the building components of the PTA FIP. Other FIP projects to improve drainage and utility infrastructure are not part of the currently proposed action.

The project area is located within the PTA cantonment, a 758-acre area that includes the Bradshaw Army Airfield (BAAF). The 80-acre project area, the focus of the FIP, is located in the northeastern corner of the cantonment. It includes barracks, troop support, administrative and industrial support facilities. The purpose of this EA is to inform Army decision makers and the public of the potential environmental impacts of the proposed action and to evaluate the preferred and no-action alternatives.

### E.1 Purpose of and Need for the Proposed Action

The proposed action is the implementation of the *building components* of the FIP. The purpose of the proposed action is to modernize building infrastructure in the project area to meet current building codes and to improve safety and quality of life for Army and other DoD personnel stationed and training there. This would be achieved through replacement and renovation of existing facilities.

The proposed action is needed to support PTA's overall mission and replace facilities that have exceeded their maximum useful life. The most common structures at PTA are Quonset huts erected in the 1950s, and never intended for long-term use. The structures are in poor physical condition, are inefficiently configured, and are prone to flooding during storms. The proposed action is needed to reduce ongoing maintenance costs, bring facilities up to current building criteria, comply with anti-terrorism/force protection (AT/FP) standards, and improve Soldier quality of life.

### E.2 Summary of the Proposed Action and Alternatives

The proposed action includes demolition and replacement of 123 buildings within the project area. Quonset huts used as barracks, administration and support buildings will be replaced with one-story concrete masonry unit (CMU) structures of similar height and size. The proposed action would improve the quality of the physical facilities in the cantonment without increasing capacity and without extending beyond existing cantonment boundaries. The cantonment would continue to provide transient housing and training space for a brigade minus (-) sized element (i.e., smaller than a regular brigade of 3,000 to 5,000 Soldiers), similar to what is currently supported. There would be no change in troop strength or training tempo, and no impact on PTA's training ranges.

The FIP also includes proposals to upgrade drainage, sewer, electrical and telecommunications infrastructure within the cantonment. These utility improvements are not part of the proposed action, have been approved under separate Records of Environmental Consideration (REC), and are either underway or completed. However, both

building and utility components are discussed in this EA in an effort to provide a comprehensive overview of the FIP.

Based on the project purpose and need and using the alternative screening factors, one action alternative was identified as reasonable: implementation of the FIP building components (i.e., preferred alternative). Other alternatives did not meet the screening criteria of fundability, location within Army-controlled lands, and ability to ensure continued mission readiness. The no-action alternative would maintain the status quo, and the FIP building components would not be implemented. Cantonment buildings would continue to deteriorate, resulting in increasing and ongoing maintenance costs and unsatisfactory living and working conditions. Because cantonment drainage and utility improvements are already approved and proceeding independent of the proposed action, they would still be completed under a no-action scenario. No other improvements would be implemented. Both the preferred alternative and no action alternative will be evaluated in this EA.

Table ES-1 summarizes the overall FIP phasing and redevelopment program. The implementation of the preferred alternative (FIP building components) begins in FY18. The implementation of the FIP is estimated to cost \$210 million and will occur over an eight-year period (Fiscal Year (FY) 16-FY23), subject to funding availability.

**Table ES-1: Proposed Phasing and Redevelopment Program**

| Fiscal Year | Phase Title                                                                              | Description                                                                                                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FY16        | • South Storm Drainage Construction                                                      | <b>Not part of proposed action.</b> See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration                                                                                           |
|             | • Consolidated Sewer Collection System Construction                                      |                                                                                                                                                                                                                                |
| FY17        | Utilities: Power, Telecommunications, and Lightning Protection and North Drainage System | <b>Not part of proposed action.</b> See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration                                                                                           |
| FY18        | Remaining utilities<br>Construction of Neighborhoods A and B                             | <b>Not part of proposed action.</b> See FY 17 description above.<br>10 barracks, 6 latrine/shower points, and 2 admin buildings; 18 buildings total                                                                            |
| FY19- 23    | Construction of Neighborhoods: C, D, E, G, H, I, L, M N, O, P and Q,                     | 51 barracks, 13 laundry/latrine/ shower points, 25 admin buildings; 5 dining facilities, 3 medical and emergency services buildings, 1 storage building, 2 community buildings and 5 industrial buildings; 105 buildings total |

*Note: Neighborhoods J and K consist of recently constructed buildings that will be retained.*

### E.3 List of Permits and Approvals

The proposed action would require the permits and approvals listed in Table ES-2 and consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, the State Historic Preservation Division under Section 106 of the National Historic Preservation Act, and the Coastal Zone Management Program in accordance with the Coastal Zone Management Act.

**Table ES-2: Potential Permits, Approvals, Acknowledgements and Required Consultations**

| Oversight Agency                                  | Permit, Approval, or Consultation                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hawaii State Historic Preservation Officer (SHPO) | Section 106 consultation for properties listed or eligible for the National Register of Historic Places (NRHP) pursuant to the National Historic Preservation Act (NHPA) of 1966 (Public Law 89-665; 16 U.S. Code (USC) §470 et seq.); 36 Code of Federal Regulations (CFR) 800 (Protection of Historic Properties) |
| United States Fish and Wildlife Service (USFWS)   | Section 7 informal consultation for threatened and endangered species or critical habitat pursuant to the Endangered Species Act (ESA) of 1973 (Public Law 93-205; 16 USC. §1531 et seq.)                                                                                                                           |
| Hawaii Department of Health, State of Hawaii      | Consultation to determine the need for National Pollutant Discharge Elimination System (NPDES) Permit for construction-related stormwater discharge for land disturbance equal or greater than one acre pursuant to the Clean Water Act of 1972 (33 USC. 121 et seq.), and permitting if required.                  |
| Coastal Zone Management Program, State of Hawaii  | Project entirely on federal land which is exempt from Coastal Zone Management Act (CZMA) of 1972 (as amended) (16 USC. §1451 et seq.). Army notified Hawaii CZM Program of its Negative Determination (no effect on coastal uses or resources).                                                                     |

### E.4 Affected Environment and Environmental Consequences

All potentially relevant resource areas were initially considered for analysis in this EA. In compliance with NEPA, CEQ, and 32 CFR part 651 guidelines, the discussion of the affected environment (i.e., existing conditions) focuses only on those resource areas potentially subject to impacts. Additionally, the level of detail used in analyzing a resource is commensurate with the anticipated level of potential environmental impact. Temporary or short-term effects (i.e., related to construction activities) and operational or long-term effects (i.e., after construction is over) were analyzed for each resource area and classified in one of four impact categories:

1. Significant impact
2. Less than significant impact
3. No impact
4. Beneficial impact

Based on the scope of the preferred and no-action alternatives, resource areas analyzed in detail include the following:

- Land Use Compatibility
- Traffic
- Cultural Resources
- Biological Resources
- Noise
- Natural Hazards, Geology and Soils
- Air Quality
- Water Resources
- Public Facilities and Infrastructure
- Socioeconomics
- Visual Resources
- Toxic and Hazardous Substances

The environmental consequences of the preferred alternative and no-action alternative, discussed in the resource sections in Section 3, are summarized in Table ES-3 below. Implementing the preferred alternative would result in less than significant and beneficial impacts.

**Table ES-3: Summary of Potential Impacts by Resource Area**

| Resource Areas         | No-Action Alternative                                                      | Preferred Alternative                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Land Use Compatibility | Significant impact due to continued deterioration of cantonment buildings. | <u>Construction</u> : Less than significant impact.<br><u>Operation</u> : No Impact.<br><u>Cumulative</u> : Less than significant impact.                                                                                                                                                                                                                                                             |
| Traffic                | No impact.                                                                 | <u>Construction</u> : Less than significant impact.<br><u>Operation</u> : No impact.<br><u>Cumulative</u> : Less than significant impact.                                                                                                                                                                                                                                                             |
| Cultural Resources     | No impact.                                                                 | <u>Archaeological resources</u> : No impact. State Historic Preservation Officer (SHPO) concurred with determination of no “historic properties affected” by ground disturbing activities.<br><u>Architectural Resources</u> : No impact. No properties eligible for listing on the National Register of Historic Places, and SHPO concurred with determination of “no historic properties affected.” |

| Resource Areas                       | No-Action Alternative                                                                                             | Preferred Alternative                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      |                                                                                                                   | <u>Cumulative</u> : Less than significant impact.                                                                                                                                                                                                                                                                                                                                                               |
| Biological Resources                 | No impact.                                                                                                        | <p><u>Construction and Operation</u>: Less than significant impact. Per Section 7 Endangered Species Act (ESA) consultation, with minimization measures, project “not likely to adversely affect” federally listed and candidate animal or plant species. “No effect” for Blackburn’s sphinx moth and Yellow-faced bees.</p> <p><u>Cumulative</u>: Less than significant impact with minimization measures.</p> |
| Noise                                | No impact.                                                                                                        | <p><u>Construction</u>: Less than significant impact.</p> <p><u>Operation</u>: No impact</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                                                                                                                                                            |
| Natural Hazards, Geology and Soils   | Minor beneficial impact due to completion of ongoing FIP drainage improvements.                                   | <p><u>Construction</u>: Less than significant impact.</p> <p><u>Operation</u>: No impact.</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                                                                                                                                                           |
| Air Quality                          | No impact.                                                                                                        | <p><u>Construction</u>: Less than significant impact.</p> <p><u>Operation</u>: No impact.</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                                                                                                                                                           |
| Water Resources                      | Minor beneficial impact due to ongoing FIP drainage and utility improvements that are proceeding under no-action. | <p><u>Construction</u>: No impact.</p> <p><u>Operation</u>: No impact.</p> <p><u>Cumulative</u>: No impact.</p>                                                                                                                                                                                                                                                                                                 |
| Public Facilities and Infrastructure | Ongoing FIP improvements to drainage and utilities will have beneficial impact under a no-action alternative.     | <p><u>Construction</u>: Less than significant impact on public facilities and infrastructure.</p> <p><u>Operation</u>: No impact on island-wide public facilities and infrastructure. Beneficial impact on Army facilities and services.</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                            |
| Socioeconomics                       | Ongoing FIP improvements to                                                                                       | <p><u>Construction</u>: Short-term beneficial impact.</p> <p><u>Operation</u>: No impact on economic factors.</p>                                                                                                                                                                                                                                                                                               |

| Resource Areas                 | No-Action Alternative                                                                                                                  | Preferred Alternative                                                                                                                                                                                                    |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | drainage and utilities will have beneficial impact.                                                                                    | Beneficial impact on morale and quality of life.<br><u>Cumulative</u> : Beneficial cumulative impact.                                                                                                                    |
| Visual Resources               | Ongoing FIP removal of overhead utility lines will have beneficial impact to visual resources.                                         | <u>Construction</u> : Less than significant impact.<br><u>Operation</u> : Beneficial impact due to replacement of aging structures and reduction of visual clutter.<br><u>Cumulative</u> : Less than significant impact. |
| Toxic and Hazardous Substances | Less than significant impact. Haz materials encountered during utility improvements handled in accordance with applicable regulations. | <u>Construction</u> : Less than significant impact.<br><u>Operation</u> : No impact.<br><u>Cumulative</u> : Less than significant impact.                                                                                |

## E.5 Avoidance and Minimization Measures

Impacts would be less than significant for all resources; therefore, no mitigation measures are required or proposed. Project activities will comply with existing regulations, permits, and plans. Construction best management practices (BMP) and other measures will minimize potential adverse impacts associated with visual resources,, air quality, noise, traffic and transportation, water resources, geology and soils, biological resources, and hazardous and toxic substances.

The following measures will be implemented to avoid and minimize environmental impacts:

### Construction Best Management Practices

- Erosion and sediment control measures such as protection of erodible soils; mechanical control of stormwater runoff from the construction site; use of sediment basins; and use of vegetation and mulch on soil exposed by grading.
- Employment of personnel qualified to identify and handle hazardous materials if unexpectedly encountered.
- Use of personal protective equipment (PPE) (e.g., protective clothing, eye protection, and respirators) during pipe removal activities to protect personnel from lead containing paint. Implementation of appropriate procedures to contain dust and paint chips that may be loosened during pipe removal activities.
- If contaminated soil is suspected, it will be tested, stored and disposed of at an appropriate waste facility.
- Implementation of fugitive dust control measures during the construction period, including during non-working periods. Measures may include sprinkling or treating



- 1 the soil with dust suppressants at the site, haul roads, and other areas disturbed by  
2 operations.
- 3 • Preparation and implementation of a dirt and dust control plan that identifies the  
4 subcontractor and equipment for cleaning along the haul route and identifies  
5 measures to reduce dirt, dust, and debris from roadways.
  - 6 • Cleaning and inspecting all construction vehicles and equipment before moving onto  
7 the worksite to prevent the spread of invasive species. Prior to construction, the PTA  
8 Natural Resources Office (NRO) will provide briefing materials to ensure inspections  
9 are conducted effectively.
  - 10 • Preparation and execution of a Construction Management Plan to avoid and minimize  
11 potential impacts of multi-year, on-post construction activities and ensure  
12 construction activities do not degrade readiness or soldier quality of life.
  - 13 • Consultation to determine the need for National Pollutant Discharge Elimination  
14 System (NPDES) Permit for construction-related stormwater discharge for land  
15 disturbance equal or greater than one acre pursuant to the Clean Water Act of 1972  
16 (33 USC. 121 et seq.), and permitting if required.

#### 17 Measures for Biological Resources

- 18 • Construction personnel will remain aware of potential for presence of the Hawaiian  
19 goose (*Branta sandvicensis*). If the Hawaiian goose is present during construction,  
20 crews will be educated on how to work safely around them. All speed limits will be  
21 followed and enforced.
- 22 • Tree trimming and removal will be avoided during Hawaiian hoary bat (*Lasiurus*  
23 *cinereus semotus*) breeding season, June 1 through September 15. All construction  
24 activities will take place during daytime. UFC standards for outdoor lighting will be  
25 followed.
- 26 • When the existing building adjacent to interpretive garden is demolished, garden is to  
27 remain intact.
- 28 • USFWS recommends that if construction activity may disturb non-native tree tobacco  
29 (*Nicotiana glauca*), the host plant for the Blackburn's sphinx moth (*Manduca*  
30 *blackburni*), contact USFWS for additional guidance.
- 31 • Although there are currently no Yellow-faced bees (*Hylaeus anthracinus*) in the  
32 cantonment, PTA is encouraged to continue surveying its property for this species.

#### 33 Measures for Invasive Pest Prevention

- 34 • Invasive Pest Prevention Standard Operating Procedures (IPPSOP) have been  
35 established to prevent the introduction of harmful invasive pests including reptiles,  
36 amphibians, invertebrates, weeds, and rapid ohia death (ROD) into PTA.
- 37 • All work vehicles, machinery, and equipment must be clean and free of debris prior to  
38 entering the PTA.
- 39 • Inspection of work vehicles, machinery, and equipment for invasive ants prior to  
40 entering the PTA.

- Auxiliary construction support sites (ACSS) and staging areas within the PTA must be kept free of invasive pests.
- All cutting tools must be sanitized to prevent rapid ohia death (ROD).
- Landscaping: new construction and land management projects will use native Hawaiian plants for landscaping to the extent practical.
- All project personnel, including subcontractors, must receive a PTA NRO briefing or review NRO-provided briefing materials prior to project implementation.

## **E.6 Consistency with Land Use Policies, Plans, and Controls**

The preferred alternative is consistent with the draft final PTA Area Development Plan (2015) and the Draft Real Property Master Plan (RPMP) (2016). It is confined to Army-owned land which is excluded from the State's coastal zone and not subject to the Coastal Zone Management Act or land use regulation by the County of Hawaii.

## **E.7 Cumulative Impacts**

Past, present, and reasonably foreseeable future actions on post include implementation of the PTA RPMP (including the preferred alternative), implementation of the FIP utility components (ongoing), and other short and long range projects (to be finalized after a forthcoming RPMP NEPA process). Other future actions may include changes in the military operations due to new training platforms and congressional mandates. Off-post, past, present, and reasonably foreseeable future actions include the new Daniel K. Inouye Highway, the Mauna Kea observatories, proposed dolphin repair at Kawaihae Harbor, activities at the Hawaii Island commercial airport, neighboring parcels including the Mauna Kea Recreational Area and the Department of Hawaiian Homelands Humuula/Piihonua tracts, and a potential new water well to serve PTA (location and technical feasibility have not been determined). Overall, the cumulative impacts of preferred alternative, in combination with past, present, and reasonably foreseeable future actions, would be less than significant.

The implementation of the proposed action, combined with previously approved and ongoing FIP utility improvements, will have a beneficial impact on the cantonment.

## **E.8 Unresolved Issues**

No unresolved issues associated with implementing the proposed action have been identified.

# 1 Table of Contents

|    |                                                                                |            |
|----|--------------------------------------------------------------------------------|------------|
| 2  | <b>EXECUTIVE SUMMARY.....</b>                                                  | <b>iii</b> |
| 3  | <b>1 PURPOSE OF AND NEED FOR THE PROPOSED ACTION.....</b>                      | <b>1-1</b> |
| 4  | 1.1 Introduction .....                                                         | 1-1        |
| 5  | 1.2 Background and Project Location .....                                      | 1-1        |
| 6  | 1.3 Purpose of and Need for the Proposed Action .....                          | 1-9        |
| 7  | 1.4 Scope of Environmental Analysis.....                                       | 1-10       |
| 8  | 1.5 Agency Coordination and Permit Requirements.....                           | 1-10       |
| 9  | 1.6 Public Participation .....                                                 | 1-11       |
| 10 | <b>2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES .....</b>             | <b>2-1</b> |
| 11 | 2.1 Proposed Action .....                                                      | 2-1        |
| 12 | 2.2 Screening Factors for Alternatives.....                                    | 2-1        |
| 13 | 2.3 Alternatives Carried Forward for Analysis .....                            | 2-2        |
| 14 | 2.3.1 No-Action Alternative .....                                              | 2-2        |
| 15 | 2.3.2 Facilities Improvement Program (Preferred Alternative).....              | 2-2        |
| 16 | 2.3.3 Avoidance and Minimization Measures .....                                | 2-15       |
| 17 | 2.4 Alternatives Considered But Not Carried Forward for Detailed Analysis..... | 2-16       |
| 18 | 2.4.1 Relocate Out of BAAF Accident Potential Zone .....                       | 2-16       |
| 19 | 2.4.2 Construct New Facilities at a New Site .....                             | 2-17       |
| 20 | 2.5 Summary of Potential Impacts to Resource Areas .....                       | 2-17       |
| 21 | <b>3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES .....</b>             | <b>3-1</b> |
| 22 | 3.1 Land Use Compatibility.....                                                | 3-2        |
| 23 | 3.1.1 Affected Environment .....                                               | 3-2        |
| 24 | 3.1.2 Environmental Consequences .....                                         | 3-3        |
| 25 | 3.2 Traffic .....                                                              | 3-3        |
| 26 | 3.2.1 Affected Environment .....                                               | 3-3        |
| 27 | 3.2.2 Environmental Consequences .....                                         | 3-4        |
| 28 | 3.3 Cultural Resources .....                                                   | 3-5        |
| 29 | 3.3.1 Affected Environment .....                                               | 3-5        |
| 30 | 3.3.2 Environmental Consequences .....                                         | 3-8        |
| 31 | 3.4 Biological Resources .....                                                 | 3-10       |
| 32 | 3.4.1 Affected Environment .....                                               | 3-11       |
| 33 | 3.4.2 Environmental Consequences .....                                         | 3-14       |

|    |          |                                                                |            |
|----|----------|----------------------------------------------------------------|------------|
| 1  | 3.5      | Noise .....                                                    | 3-17       |
| 2  |          | 3.5.1 Affected Environment .....                               | 3-17       |
| 3  |          | 3.5.2 Environmental Consequences .....                         | 3-18       |
| 4  | 3.6      | Natural Hazards, Geology and Soils .....                       | 3-18       |
| 5  |          | 3.6.1 Affected Environment .....                               | 3-18       |
| 6  |          | 3.6.2 Environmental Consequences .....                         | 3-19       |
| 7  | 3.7      | Air Quality .....                                              | 3-19       |
| 8  |          | 3.7.1 Affected Environment .....                               | 3-19       |
| 9  |          | 3.7.2 Environmental Consequences .....                         | 3-21       |
| 10 | 3.8      | Water Resources .....                                          | 3-22       |
| 11 |          | 3.8.1 Affected Environment .....                               | 3-22       |
| 12 |          | 3.8.2 Environmental Consequences .....                         | 3-23       |
| 13 | 3.9      | Public Facilities and Infrastructure.....                      | 3-23       |
| 14 |          | 3.9.1 Affected Environment .....                               | 3-23       |
| 15 |          | 3.9.2 Environmental Consequences .....                         | 3-24       |
| 16 | 3.10     | Socioeconomics .....                                           | 3-24       |
| 17 |          | 3.10.1 Affected Environment .....                              | 3-24       |
| 18 |          | 3.10.2 Environmental Consequences .....                        | 3-25       |
| 19 | 3.11     | Visual Resources .....                                         | 3-26       |
| 20 |          | 3.11.1 Affected Environment .....                              | 3-26       |
| 21 |          | 3.11.2 Environmental Consequences .....                        | 3-28       |
| 22 | 3.12     | Toxic and Hazardous Substances.....                            | 3-29       |
| 23 |          | 3.12.1 Affected Environment .....                              | 3-29       |
| 24 |          | 3.12.2 Environmental Consequences .....                        | 3-29       |
| 25 | <b>4</b> | <b>CUMULATIVE IMPACTS .....</b>                                | <b>4-1</b> |
| 26 | 4.1      | Definition of Cumulative Impacts .....                         | 4-1        |
| 27 | 4.2      | Scope of Cumulative Impacts Analysis .....                     | 4-1        |
| 28 | 4.3      | Past, Present, and Reasonably Foreseeable Future Actions ..... | 4-1        |
| 29 | 4.4      | Assessment.....                                                | 4-10       |
| 30 | 4.5      | Conclusions.....                                               | 4-12       |
| 31 | <b>5</b> | <b>OTHER CONSIDERATIONS REQUIRED BY NEPA .....</b>             | <b>5-1</b> |

|    |          |                                                                                          |            |
|----|----------|------------------------------------------------------------------------------------------|------------|
| 1  | 5.1      | Relationship between Short-Term Uses and Long-Term Productivity.....                     | 5-1        |
| 2  | 5.2      | Irreversible or Irretrievable Commitment of Resources.....                               | 5-1        |
| 3  | 5.3      | Significant Unavoidable Adverse Effects.....                                             | 5-2        |
| 4  | 5.4      | Mitigation Measures.....                                                                 | 5-2        |
| 5  | 5.5      | Coastal Zone Management Act.....                                                         | 5-2        |
| 6  | 5.6      | Compliance with Other Executive Orders.....                                              | 5-3        |
| 7  | <b>6</b> | <b>REFERENCES .....</b>                                                                  | <b>6-1</b> |
| 8  | <b>7</b> | <b>LIST OF PREPARERS.....</b>                                                            | <b>7-1</b> |
| 9  |          |                                                                                          |            |
| 10 |          | <b>LIST OF FIGURES</b>                                                                   |            |
| 11 |          | Figure 1-1: Location of Pohakuloa Training Area on Hawaii Island.....                    | 1-2        |
| 12 |          | Figure 1-2: Location of the Project Area within PTA .....                                | 1-4        |
| 13 |          | Figure 1-3: Existing Project Area .....                                                  | 1-7        |
| 14 |          | Figure 2-1: Proposed Project Area Site Plan .....                                        | 2-5        |
| 15 |          | Figure 2-2: Comparison of Existing Quonset Hut and CMU Prototype Replacements.....       | 2-7        |
| 16 |          | Figure 2-3: Conceptual Wastewater Plan .....                                             | 2-9        |
| 17 |          | Figure 2-4: Conceptual Stormwater Drainage Plan.....                                     | 2-13       |
| 18 |          | Figure 3-2: View of the project area from DKI Highway, approaching from the east.....    | 3-27       |
| 19 |          | Figure 3-3: View of the project area from DKI Highway, approaching from the west.....    | 3-27       |
| 20 |          | Figure 3-4: View of the project area from DKI Highway, looking south toward Mauna Loa .. | 3-28       |
| 21 |          |                                                                                          |            |
| 22 |          |                                                                                          |            |
| 23 |          | <b>LIST OF TABLES</b>                                                                    |            |
| 24 |          | Table ES-1: Proposed Phasing and Redevelopment Program .....                             | iii        |
| 25 |          | Table ES-2: Potential Permits, Approvals, Acknowledgements and Required Consultations..  | iv         |
| 26 |          | Table ES-3: Summary of Potential Impacts by Resource Area .....                          | v          |
| 27 |          | Table 1-1: Summary of Existing Project Area Buildings and Uses .....                     | 1-5        |
| 28 |          | Table 1-2: Potential Permits, Approvals, Acknowledgements and Required Consultations ..  | 1-11       |
| 29 |          |                                                                                          |            |
| 30 |          | Table 2-1: Proposed Phasing and Redevelopment Program.....                               | 2-3        |
| 31 |          | Table 2-2: Summary of Potential Impacts by Resource Area .....                           | 2-18       |
| 32 |          | Table 3-1: Protected Bird Species of the PTA Cantonment.....                             | 3-14       |
| 33 |          | Common Name .....                                                                        | 3-14       |
| 34 |          | Table 4-1 Past, Present, and Reasonably Foreseeable Future Actions.....                  | 4-3        |
| 35 |          |                                                                                          |            |

**1 APPENDICES**

- 2 A1 Section 106, National Historic Preservation Act Consultation for Archaeological
- 3 Resources (at or below ground surface level)
- 4 A2 Section 106, National Historic Preservation Act Consultation for Architectural
- 5 Resources (buildings and structures above ground)
- 6 B Section 7, Endangered Species Act Consultation
- 7 C Coastal Zone Management Act Consultation

1

## Abbreviations and Acronyms

2

| Acronym         | Definition                                                            | Acronym     | Definition                           |
|-----------------|-----------------------------------------------------------------------|-------------|--------------------------------------|
| ACHP            | Advisory Council on Historic Preservation                             | dba         | A-weighted decibels                  |
| ACM             | Asbestos containing material                                          | DHHL        | Department of Hawaiian Home Lands    |
| ACSS            | Auxiliary construction support sites                                  | DKI Highway | Daniel K. Inouye Highway             |
| ADT             | Average Daily Traffic                                                 | DLA         | Defense Logistics Agency             |
| amsl            | above mean sea level                                                  | DoD         | United States Department of Defense  |
| Army            | United States Department of the Army                                  | DoH         | Department of Health                 |
| AT/FP           | Antiterrorism/Force Protection                                        | DOT         | Department of Transportation         |
| APE             | Area of Potential Effect                                              | DPW         | Directorate of Public Works          |
| APZ             | Accident Potential Zone                                               | EA          | Environmental Assessment             |
| BAAF            | Bradshaw Army Airfield                                                | EIS         | Environmental Impact Statement       |
| BMP             | best management practice                                              | EO          | Executive Order                      |
| BN              | Battalion                                                             | EMS         | Emergency medical services           |
| CDUP            | Conservation District Use Permit                                      | EPA         | U.S. Environmental Protection Agency |
| CEQ             | Council on Environmental Quality                                      | ESA         | Endangered Species Act               |
| CERCLA          | Comprehensive Environmental Response, Compensation, and Liability Act | FIP         | Facilities Improvement Program       |
| CFR             | Code of Federal Regulations                                           | FIRM        | Flood Insurance Rate Map             |
| CMU             | concrete modular unit                                                 | FNSI        | Finding of No Significant Impact     |
| CO              | company                                                               | FY          | Fiscal Year                          |
| CO <sub>2</sub> | carbon dioxide                                                        | GDP         | Gross Domestic Product               |
| CZMA            | Coastal Zone Management Act                                           | GHG         | greenhouse gas                       |

| <b>Acronym</b> | <b>Definition</b>                                      | <b>Acronym</b>  | <b>Definition</b>                               |
|----------------|--------------------------------------------------------|-----------------|-------------------------------------------------|
| gpd            | Gallons per day                                        | NAAQS           | National Ambient Air Quality Standards          |
| HAR            | Hawaii Administrative Rules                            | NEPA            | National Environmental Policy Act               |
| HAZMAT         | Hazardous materials and items                          | NHPA            | National Historic Preservation Act              |
| HELCO          | Hawaii Electric Company                                | NO <sub>2</sub> | nitrogen dioxide                                |
| HM             | Hazardous materials                                    | NOI             | Notice of Intent                                |
| HMMP           | Hazardous Materials Management Plan                    | NPDES           | National Pollutant Discharge Elimination System |
| HW             | Hazardous waste                                        | NPS             | U.S. National Park Service                      |
| IBCT           | Infantry brigade combat team                           | NRCS            | Natural Resources Conservation Service          |
| IIPBA          | Infantry Platoon Battle Area                           | NRHP            | National Register of Historic Places            |
| IPBC           | Infantry Platoon Battle Course                         | NRO             | Natural Resources Office                        |
| IHWMP          | Installation Hazardous Waste Management Plan           | PCB             | polychlorinated biphenyls                       |
| IWS            | Individual wastewater systems                          | PCSI            | Pacific Consulting Services, Inc.               |
| IPPSOP         | Invasive Pest Prevention Standard Operating Procedures | ppm             | parts per million                               |
| KMA            | Keamuku Maneuver Area                                  | PTA             | Pohakuloa Training Area                         |
| LBP            | Lead Based Paint                                       | REC             | Record of Environmental Consideration           |
| LIBCT          | Light Infantry Brigade Combat Team                     | RCRA            | Resource, Conservation, and Recovery Act        |
| MBTA           | Migratory Bird Treaty Act                              | RIMPAC          | Rim of the Pacific                              |
| MEF            | Marine Expeditionary Force                             | ROD             | rapid ohia death                                |
| MILCON         | Military Construction                                  | ROI             | region of influence                             |
| MKRA           | Mauna Kea Recreation Area                              | RPMP            | Real Property Master Plan                       |
| MOUT           | Military operations in urban terrain                   | SBCT            | Stryker Brigade Combat Team                     |



| <b>Acronym</b> | <b>Definition</b>                                 |
|----------------|---------------------------------------------------|
| SHPO           | State Historic Preservation Officer               |
| SPCCP          | Spill Prevention Control and Countermeasures Plan |
| SRM            | Sustainment, Restoration and Modernization        |
| SWPPP          | Stormwater Pollution Prevention Plan              |
| TCP            | Traditional cultural property                     |
| TMK            | Tax Map Key                                       |
| TMT            | Thirty Meter Telescope                            |
| TSCA           | Toxic Substances Control Act                      |
| UFC            | Unified Facilities Criteria                       |
| UH             | University of Hawaii                              |
| URL            | Uniform Resource Locator                          |
| U.S.           | United States                                     |
| U.S.C.         | United States Code                                |
| USACE          | U.S. Army Corps of Engineers                      |
| USACE-POH      | U.S. Army Corps of Engineers, Honolulu District   |
| USAG-HI        | U.S. Army Garrison, Hawaii                        |
| USARPAC        | U.S. Army Pacific Command                         |
| USFWS          | U.S. Fish and Wildlife Service                    |
| USGS           | U.S. Geological Survey                            |
| USN            | U.S. Navy                                         |
| vpd            | Vehicles per day                                  |

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# **1 Purpose of and Need for the Proposed Action**

## **1.1 Introduction**

This Environmental Assessment (EA) evaluates the environmental impact of implementing a Facilities Improvement Program (FIP) at the United States Department of the Army ("Army") Pohakuloa Training Area (PTA) on Hawaii Island. The FIP is intended to modernize building and utility infrastructure within an 80-acre area to meet current building codes and improve safety and quality of life for personnel stationed and training at PTA. The preferred alternative, and the focus of this EA, is construction of the building components of the FIP.

The Army has prepared this EA in accordance with the National Environmental Policy Act (NEPA) [42 United States Code (USC) §§ 4321 to 4370 (f)], the Council on Environmental Quality's NEPA regulations [Title 40 of the Code of Federal Regulations (CFR) Parts 1500–1508], and 32 CFR Part 651, Environmental Analysis of Army Actions. The information contained in this EA will be reviewed and considered by the Army prior to the final decision on how to proceed with the implementation of the preferred alternative, if at all, and to determine whether a Finding of No Significant Impact (FNSI) is appropriate or whether a Notice of Intent to prepare an environmental impact statement (EIS) should be issued.

## **1.2 Background and Project Location**

The Pohakuloa Training Area is an approximately 130,000-acre training facility controlled by the Army, and includes live fire ranges and 758-acre cantonment, which includes the Bradshaw Army Airfield (BAAF) and a base camp with administration and support facilities. The 80-acre project area, which is the focus of the FIP, is located in the northeastern corner of the cantonment.

As the largest training area in Hawaii, PTA plays a significant role in the training and readiness of U.S. Armed Forces in the Pacific. It offers the largest live-fire operations training area on U.S. soil in the Pacific, and offers realistic training opportunities not found elsewhere. This capability is critical to maintaining a ready force with global reach.

PTA can support up to 2,300 military personnel during training exercises. Training tempo fluctuates by year, but Fiscal Year (FY) 2014, for example, included a total of 33 training rotations, including the Rim of the Pacific (RIMPAC) multi-national training exercises. During three of the largest exercises that year, occupancy ranged between 1,000 and 1,500 personnel, and during RIMPAC, occupancy ranged between 1,500 to 2,000 personnel.

PTA is located on Hawaii Island, the largest and furthest south of the eight main Hawaiian Islands. PTA is situated in the high plateau saddle region of the island, between three major volcanoes, Mauna Kea (13,794 feet above mean sea level [amsl]), Mauna Loa (13,678 feet amsl), and Hualalai (8,721 feet amsl) (Figure 1-1). Ground elevation at the cantonment is approximately 6,300 feet amsl.

PTA is approximately 35 miles west of the city of Hilo, 55 miles northeast of Kailua-Kona and about 40 miles southeast of Kawaihae Harbor, the commercial port through which most of PTA's material and supplies are shipped. Commercial airports in Hilo and Kona are used for the transport of Soldiers to Hawaii Island. Most of PTA, including the project area, is located within the Hamakua District, one of nine districts on Hawaii Island. A portion of PTA's training range is within the South Kohala and North Kona Districts, and a small portion on the east

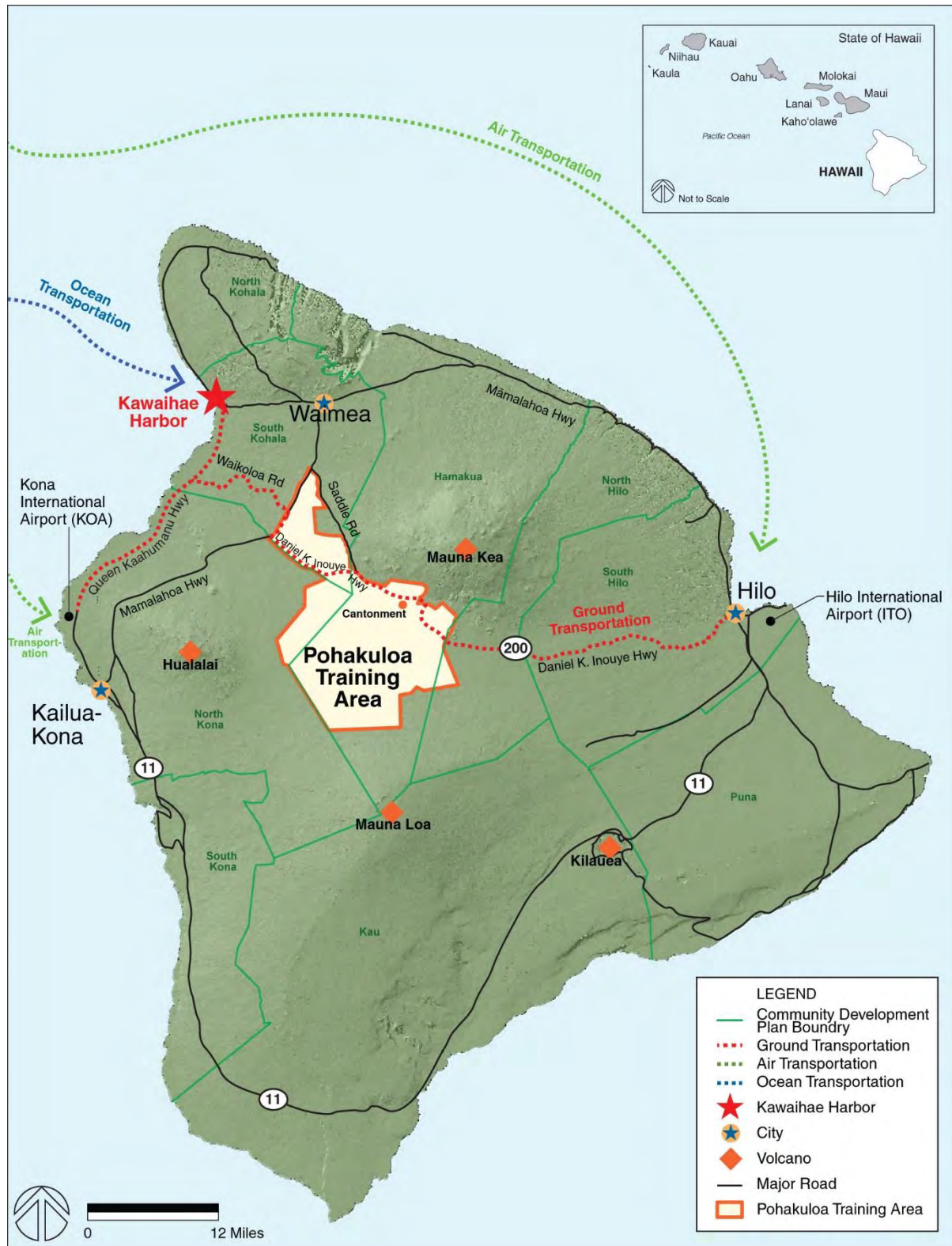


Figure 1-1: Location of Pohakuloa Training Area on Hawaii Island

side extends into the North Hilo District. Vehicular access to PTA is via the state-owned Daniel K. Inouye (DKI) Highway (State Route 200) from Hilo and a combination of state highways from Kailua-Kona, Waimea and Kawaihae.

Figure 1-2 shows the extent of PTA's expansive training ranges, and the location of the cantonment and project area. Bradshaw Army Airfield (BAAF), located on the west side of the cantonment, has a 3,700 foot long runway. The project area is located on the far eastern end of the cantonment, and includes barracks, troop support, administrative, and industrial support facilities.

Land uses surrounding PTA includes the Mauna Kea Recreational Area located approximately one-mile east of the project area and the residential community of Waikii Ranch, located approximately 13 miles to the northwest.

Figure 1-3 shows the existing project area site plan. The project area lies between DKI Highway to the north and the Old Saddle Road to the south, BAAF to the west, and state land to the east. The main gate from the DKI Highway is located at the northeast corner. The back gate to the PTA ranges via the Old Saddle Road is located to the southwest.

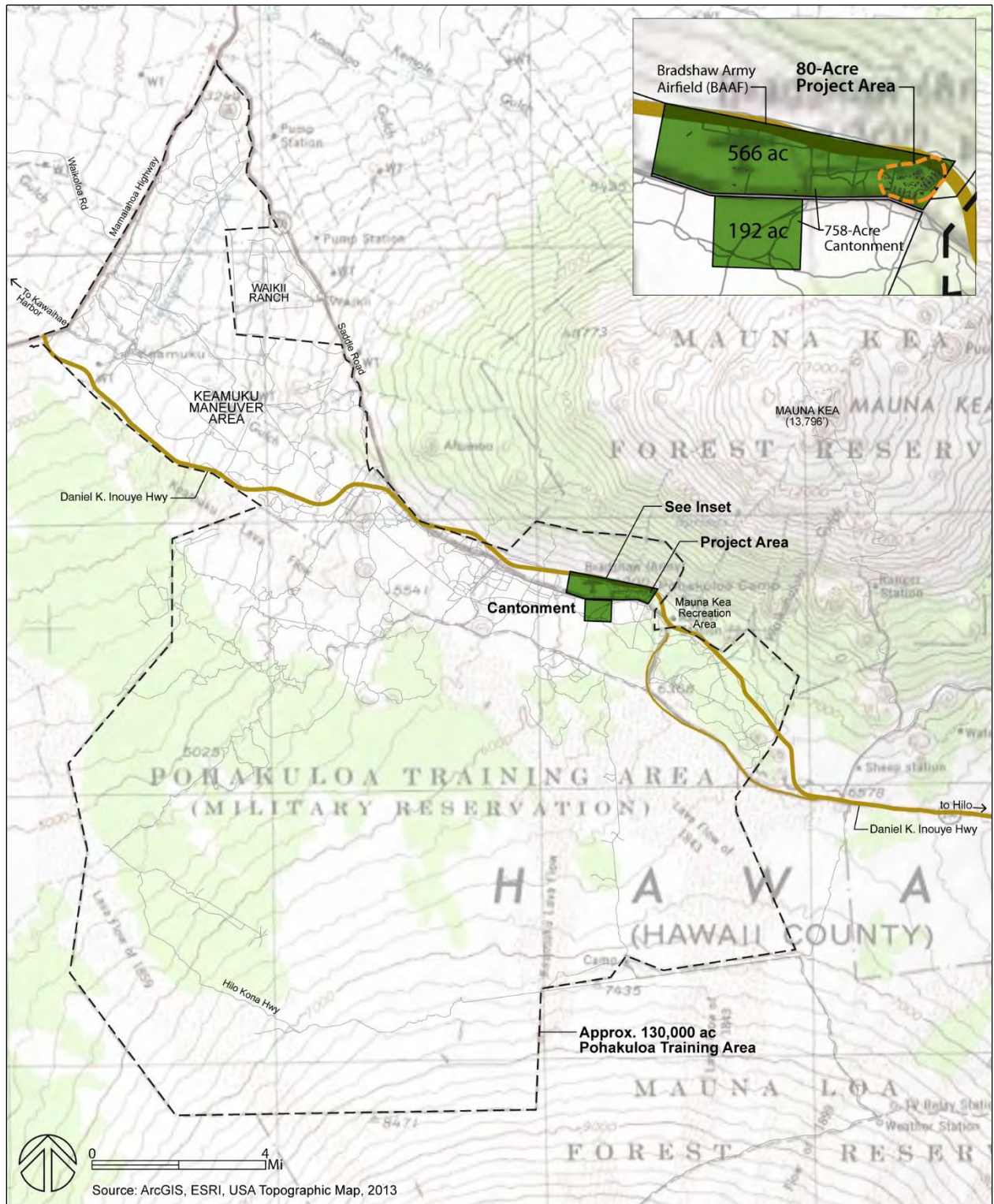
The cantonment was originally developed by the Army in the late 1950s and has largely remained intact except for changes made in the late 1990s to accommodate the realignment of Saddle Road, now known as the Daniel K. Inouye (DKI) Highway, and several new buildings constructed in the early 2000s.

The 80-acre project area includes 145 single-story buildings, 66 of which are World War II era Quonset huts used as barracks and other uses by Soldiers who come for training exercises. The barracks are concentrated on the west side of the project area. Other buildings in the project area include administration, industrial, medical and dining facilities. Industrial activities (e.g., vehicle maintenance, storage and repair facilities) are concentrated on the west side of the project area, nearest BAAF.

The buildings are grouped in "neighborhoods" to maintain unit-level integrity and walkability. For example, Neighborhood A on Figure 1-3 houses one company, and neighborhoods A-F can accommodate one battalion. A typical company is comprised of 200–250 Soldiers that occupy one row of five barracks, with access to their own latrines, shower points, and company-level administrative facilities. Battalion administrative spaces are located in the G and Q neighborhoods. Dining and community facilities (theatre, chapel, fitness center, etc.) are located in the central area for easy pedestrian access (neighborhoods H and I). The cantonment can accommodate a maximum of 2,300 Soldiers at one time (i.e., 2,300 beds).

The 145 buildings in the project area encompass approximately 277,000 square feet of space. Overall density is very low, with a floor area ratio (building floor area divided by site area) of approximately 0.08 (very low density). By comparison, a small retail shopping center typically has a floor area ratio in the 0.2-0.3 range. Table 1-1 summarizes the existing building types, counts, and floor area. The barracks, industrial and administrative uses comprise 82% of the buildings and floor area.





1 Figure 1-2: Location of the Project Area within PTA



1 **Table 1-1: Summary of Existing Project Area Buildings and Uses**

| Use                        | Buildings | Gross square feet | Floor Area Percentage |
|----------------------------|-----------|-------------------|-----------------------|
| Residential (barracks)     | 66        | 117,441           | 42%                   |
| Industrial                 | 37        | 77,570            | 28%                   |
| Administration             | 17        | 31,725            | 11%                   |
| Community Use              | 7         | 21,632            | 8%                    |
| Emergency Medical Services | 6         | 10,670            | 4%                    |
| Dining Facility            | 6         | 11,082            | 4%                    |
| Shower/Latrine             | 6         | 7,057             | 3%                    |
| Total                      | 145       | 277,177           | 100%                  |

2 *Source: HHF; 2016 TAB and 2016 Facility Inventory*

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Figure 1-3: Existing Project Area

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### 1.3 Purpose of and Need for the Proposed Action

The proposed action is the implementation of the **building components** of the Cantonment Facilities Improvement Program (FIP). The FIP also includes projects to improve drainage, wastewater, electrical, and telecommunications facilities. These **utility components** are underway and are not part of the currently proposed action. However, both building and utility improvements are part of the overall FIP, and are discussed in this EA.

The purpose of the FIP is to provide a comprehensive plan to improve and upgrade utility and building infrastructure in support of PTA's operations and mission. The mission of PTA is to provide a quality joint/combined arms facility that provides logistics, public works, airfield support, and environmental and cultural stewardship in support of the U.S. Army Pacific Command (USARPAC) training strategy, while maintaining an enduring partnership with Hawaii Island neighbors. PTA's vision statement includes providing and maintaining an austere but safe training facility that supports realistic training.

While an austere training environment is expected at PTA, the substandard condition of the physical facilities impairs mission readiness, by taking focus and resources away from the training mission. It has also negatively impacted training equipment, and jeopardizes the health and safety of Soldiers.

The FIP improvements will modernize aging, outdated utility and building infrastructure which do not support PTA's mission, and which require increasing maintenance and repair to remain operational. The most common structures at PTA are Quonset huts erected in the 1950s, and never intended for long-term use. The structures are in poor physical condition and the curved walls of the Quonset huts create inefficiencies in space utilization (e.g., limiting the use of outer walls, and requiring extra wide corridors).

Quonset huts used as barracks during training do not meet minimum standards for health and safety. Doorways in some of the Quonset huts are located below existing grade due to erosion caused by past flooding and the diminished capacity of the original drainage systems. While flooding events are not frequent, they can be intense and quickly overwhelm existing drainage facilities. Several of the Quonset huts are regularly flooded during storms, creating ongoing maintenance issues and subjecting Soldiers to unsafe conditions. Soldiers have returned from the ranges to barracks with ankle-deep water and mud, and damaged furniture and equipment.

The cantonment's aging electrical and telecommunications infrastructure fails to meet today's technological needs. Continued investment in the maintenance of outdated utilities is not cost effective. The FIP proposes to place utilities underground to reduce exposure to the harsh elements, increasing system reliability and reducing ongoing maintenance requirements.

The existing cantonment layout was established prior to current DoD antiterrorism/force protection (AT/FP) standards, and is not in conformance with the current Unified Facilities Criteria (UFC). The FIP improvements will site and design facilities in compliance with current criteria.

## 1.4 Scope of Environmental Analysis

This EA includes an analysis of potential environmental impacts associated with the proposed modernization of buildings and utility infrastructure at PTA's existing cantonment. The resource areas analyzed in this EA include the following:

- Land Use Compatibility
- Traffic
- Cultural Resources
- Biological Resources
- Noise
- Natural Hazards, Geology and Soils
- Air Quality
- Water Resources
- Public Facilities and Infrastructure
- Socioeconomics
- Visual Resources
- Toxic and Hazardous Substance

## 1.5 Agency Coordination and Permit Requirements

As part of the NEPA compliance process, USAG-HI has engaged in coordination, consultation, and permitting with regulatory agencies to ensure that all applicable laws, rules, regulations, and policies have been satisfied with respect to the proposed action. Potential permits, approvals, and consultation requirements for the project include but are not limited to those listed in Table 1-2.



**Table 1-2: Potential Permits, Approvals, Acknowledgements and Required Consultations**

| Oversight Agency                                  | Permit, Approval, or Consultation                                                                                                                                                                                                                                         |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hawaii State Historic Preservation Officer (SHPO) | Section 106 consultation for properties listed or eligible for the National Register of Historic Places (NRHP) pursuant to the National Historic Preservation Act (NHPA) of 1966 (Public Law 89-665; 16 USC §470 et seq.); 36 CFR 800 (Protection of Historic Properties) |
| United States Fish and Wildlife Service (USFWS)   | Section 7 informal consultation for threatened and endangered species or critical habitat pursuant to the Endangered Species Act (ESA) of 1973 (Public Law 93-205; 16 USC. §1531 et seq.)                                                                                 |
| Hawaii Department of Health, State of Hawaii      | National Pollutant Discharge Elimination System (NPDES) Permit for construction-related stormwater discharge for land disturbance equal or greater than one acre pursuant to the Clean Water Act of 1972 (33 USC. 121 et seq.)                                            |
| Coastal Zone Management Program, State of Hawaii  | Project entirely on federal land which is exempt from Coastal Zone Management Act (CZMA) of 1972 (as amended) (16 USC. §1451 et seq.). Army notified Hawaii CZM Program of its Negative Determination (no effect on coastal uses or resources).                           |

## 1.6 Public Participation

In accordance with Army policies and instructions for implementing NEPA, the EA must be made readily available to the public for review. This distribution must be planned to ensure that all appropriate entities and stakeholders have easy access to the material. A notice of availability (NOA) of the EA and Draft Finding of No Significant Impact (DFNSI) will be published in newspapers of mass circulation and other means announcing a 30-day public review and comment period for the EA and DFNSI, including these local publications:

- State of Hawaii Office of Environmental Quality Control's (OEQC's) *The Environmental Notice*
- West Hawaii Today
- Hawaii Tribune-Herald

Electronic copies of the EA and DFNSI will be available for download through an internet address published in the NOA, and hard copies will be made available in appropriate public libraries. Comments can be emailed to [usaghi.pao.comrel@us.army.mil](mailto:usaghi.pao.comrel@us.army.mil) or mailed to the Environmental Division, Directorate of Public Works, United States Army Garrison, Hawai'i, 947 Wright Avenue, Wheeler Army Airfield, Schofield Barracks, Hawai'i 96857-5013. After the close of the public review period, the Army will carefully assess the comments, and reach a decision on whether to issue a FNSI or to proceed with a Notice of Intent (NOI) to prepare an Environmental Impact Statement.

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## 2 Description of the Proposed Action and Alternatives

### 2.1 Proposed Action

The proposed action will implement the **building components** of the Cantonment Facilities Improvement Program (FIP), specifically the demolition and replacement of 123 buildings within the project area. The intent of this action is to meet current building codes and requirements and improve the quality of facilities without increasing the capacity (i.e., total number of beds) or extending beyond the existing physical boundaries of the cantonment.

The FIP **utility components** to upgrade sewer, electrical and telecommunication systems and drainage infrastructure within the cantonment are not part of the proposed action. These utility and infrastructure improvements have previously been approved under Records of Environmental Consideration (REC), and are underway or completed. However, both building and utility components are discussed in this EA, to provide a comprehensive overview of the FIP proposals.

The implementation of the PTA FIP is estimated to cost \$210 million and to occur over an eight-year period (FY16-FY23), subject to funding availability.

The end-state would continue to provide housing and training space for a brigade minus (-) sized element,<sup>1</sup> similar to what currently exists. No permanent or long-term housing is proposed.

### 2.2 Screening Factors for Alternatives

The National Environmental Policy Act (NEPA)'s implementing regulations provide guidance on the consideration of alternatives to a federally proposed action and require rigorous exploration and objective evaluation of reasonable alternatives. Only those alternatives determined to be reasonable and meet the purpose and need require detailed analysis.

Potential alternatives that meet the purpose and need were evaluated against the following screening factors for determining what is "reasonable":

1. Fundability. Traditional Federal Military Construction (MILCON) dollars are highly competitive and are subject to year-to-year Congressional appropriations. The Army's sustainment, repair and maintenance (SRM) budgets are another competitive source of funding but more limited than MILCON funding. A reasonable alternative requires a potential source of funding.
2. Real Estate. Construction activities need to be confined to Army-controlled lands. A reasonable alternative is located within Army-controlled lands.
3. Mission Readiness. Basic building code compliance issues (e.g., fire protection, wind and seismic load standards, and electrical and plumbing system standards) need to be addressed to ensure mission readiness and personnel safety. A reasonable alternative

---

<sup>1</sup> Army operational units are described as divisions (3 brigades), brigades (3+ battalions), battalions (3–5 companies), companies (3–5 platoons), platoons (3–4 squads) and squad (4–10 soldiers). A brigade includes 3,000 to 5,000 soldiers. (<http://www.army.mil/info/organization/unitsandcommands/oud/>).

<sup>1</sup> [http://www.wbdg.org/references/pa\\_dod.php](http://www.wbdg.org/references/pa_dod.php).

1 ensures that the PTA cantonment, as a vital part of the national defense infrastructure,  
2 is kept in operation during reconstruction and renovation activities.

### 3 **2.3 Alternatives Carried Forward for Analysis**

4 Based on the reasonable alternative screening factors and the purpose and need for the  
5 proposed action, one action alternative was identified : implementation of the building  
6 components of the Facilities Improvement Program (FIP). This preferred alternative will be  
7 evaluated in the EA. The no-action alternative is also carried forward in the environmental  
8 analysis as required by NEPA.

#### 9 **2.3.1 No-Action Alternative**

10 The no-action alternative represents the status quo, and provides a baseline against which to  
11 analyze the preferred alternative. Under the no-action alternative, the building components of  
12 the FIP would not be implemented, the cantonment's buildings would not be modernized, and  
13 the goals of supporting mission readiness and improved personnel quality of life would not be  
14 realized. Because the FIP drainage and utility components have already been approved  
15 (under REC) and are proceeding independent of the proposed action, they will be completed  
16 under the no-action alternative. However, the existing substandard buildings would remain  
17 and continue to deteriorate, resulting in increasing and ongoing maintenance costs. Buildings  
18 will continue to fail to meet AT/FP standards, and interior spaces will continue to be  
19 inefficiently used.

#### 20 **2.3.2 Facilities Improvement Program (Preferred Alternative)**

21 U.S. Army Garrison, Hawaii proposes to undertake the building components of the Facilities  
22 Improvement Program (FIP) to modernize building infrastructure to meet current building  
23 codes and improve safety and quality of life for Army and other DoD personnel stationed and  
24 training there. The preferred alternative would include replacement of approximately 123  
25 aging buildings. Site preparation work would include localized grubbing, trenching, and  
26 grading within the project area. The existing pattern of the street network would remain  
27 unchanged as would the general density and basic land use configuration. The proposed  
28 improvements would be constructed in accordance with all applicable laws.

29 The overall FIP construction costs, including both building and utility components, is  
30 estimated at \$210 million. All FIP construction activities are expected to take place over an  
31 eight-year period (FY16-FY23), subject to funding availability. The preferred alternative  
32 would improve the quality of the buildings within the cantonment without increasing the  
33 capacity or total number of beds or extending beyond the existing cantonment boundaries.  
34 The end-state would continue to provide housing and training space for a brigade (-) sized  
35 element, similar to what is currently provided.

36 USAG-HI intends to maintain an austere training environment at PTA where Soldiers are  
37 exposed to heat, cold and altitude with only their standard issue equipment. The FIP  
38 improvements would be designed to meet minimal building codes addressing life and safety  
39 issues – but are not intended to provide the comforts and conveniences that Soldiers might  
40 receive at their home posts.

**2.3.2.1 Proposed Phasing and Redevelopment Program**

Table 2-1 summarizes the overall FIP Phasing and Redevelopment Program keyed to Figure 2-1 (Proposed Project Area Site Plan). The preferred alternative is scheduled to begin in Fiscal Year (FY)18, and would replace 85% or 123 of the existing 145 buildings.

FIP utility components are illustrated in Figures 2-3 (Wastewater Plan) and 2-4 (Stormwater Drainage Plan). Construction of the south storm drainage system and the consolidated sewer collection system is underway. The cantonment-wide utilities and telecommunications design phase is currently underway (these infrastructure and utility upgrade projects are all approved under REC discussed in Section 2.3.2.2.)<sup>2</sup>

Although part of the proposed action, the utility components are included in the phasing table to present a comprehensive picture of the FIP recommendations and implementation.

**Table 2-1: Proposed Phasing and Redevelopment Program**

| Fiscal Year | Phase Title                                                                              | Description                                                                                                                                                                                                                  |
|-------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FY16        | • South Storm Drainage Construction                                                      | <b>Not part of proposed action.</b> See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration                                                                                         |
|             | • Consolidated Sewer Collection System Construction                                      |                                                                                                                                                                                                                              |
| FY17        | Utilities: Power, Telecommunications, and Lightning Protection and North Drainage System | <b>Not part of proposed action.</b> See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration                                                                                         |
| FY18        | Remaining utilities<br>Construction of Neighborhoods A and B                             | <b>Not part of proposed action.</b> See FY 17 description above.<br>10 barracks, 6 latrine/shower points, and 2 admin buildings; 18 buildings total                                                                          |
| FY19- 23    | Construction of Neighborhoods: C, D, E, G, H, I, L, M N, O, P and Q,                     | 51 barracks, 13 laundry/latrine/hower points, 25 admin buildings; 5 dining facilities, 3 medical and emergency services buildings, 1 storage building, 2 community buildings and 5 industrial buildings; 105 buildings total |

*Note: Neighborhoods J and K consist of recently constructed buildings that will be retained.*

<sup>2</sup> Record of Environmental Consideration (REC) is defined under 32 CFR 651.19 as a signed statement submitted with project documentation that briefly documents that an Army action has received environmental review. RECs are prepared for actions qualified under predefined Categorical Exclusions (CX) that require them, and for actions covered by existing or previous NEPA documentation. A REC briefly describes the proposed action and timeframe, identifies the proponent and approving official(s), and clearly shows how an action qualifies for a CX, or is already covered in an existing EA or EIS. When used to support a CX, the REC must address the use of screening criteria to ensure that no extraordinary circumstances or situations exist (Army CXs are defined in Subpart D of 32 CFR Part 651 "Environmental Analysis of Army Actions").

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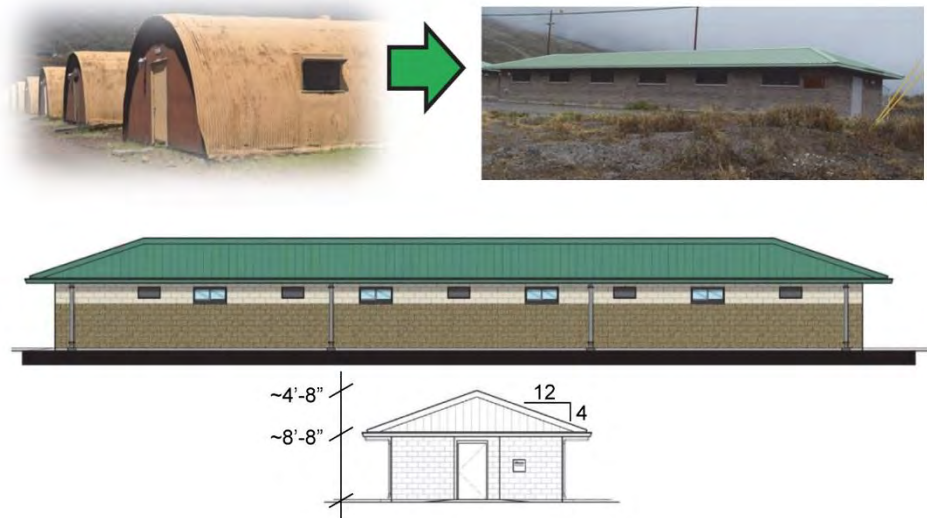




**Figure 2-1: Proposed Project Area Site Plan**

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- 1 Barracks replacement phasing would displace between 400 and 700 beds in a given year for  
2 several years (accommodations for two to three companies), about 18-30% of available beds.  
3 Construction phasing will be coordinated with the Garrison Commander to ensure the  
4 periodic decreases in bed inventory does not impact operational readiness (Soldiers can use  
5 tents as a temporary accommodation if needed).
- 6 The preferred alternative involves repair and/or replacement of the cantonment Quonset  
7 huts<sup>3</sup> and other buildings with one-story concrete masonry unit (CMU) structures of similar  
8 height and generally with the same floor area and footprint as the existing structures (Figure  
9 2-2). The hipped, low-sloped, standing metal seem roofs depicted below would be similar to  
10 recent cantonment buildings (also shown below).



11  
12 **Figure 2-2: Comparison of Existing Quonset Hut and CMU Prototype**  
13 **Replacements**

14 *Source: Images from USAG-HI DPW (some modifications)*

- 15 Proposed replacement facilities are to be constructed within the general existing building  
16 footprints in accordance with Army regulations governing repair and replacement projects.  
17 USAG-HI is analyzing several barracks replacement approaches including: 1) a “one for one”  
18 replacement where each existing barracks (approx. 100 feet long x 20 feet wide or 2,000  
19 square feet each housing 40-50 Soldiers in bunk beds) is replaced with a CMU building of  
20 similar size and capacity; and 2) a larger scale of replacement such as five individual barracks  
21 replaced with a single, larger CMU barracks building (“five for one”), with a proportionally  
22 similar number of beds (i.e., five times the number of beds as in the five smaller barracks  
23 buildings it replaces). The company-level barracks building could incorporate other elements  
24 of the company-level facilities like latrines, shower points, and administrative uses, or these  
25 could remain as separate buildings. The specific replacement ratio will depend on the types of

<sup>3</sup> Quonset huts (prefabricated structure of corrugated steel with a semi-circular cross section) were first manufactured by the U.S. Navy in 1941 as lightweight buildings that could be shipped anywhere and assembled without skilled labor. The huts were typically used for barracks, latrines, and administrative purposes. At PTA, the huts are bolted to concrete slabs. The huts were relocated to PTA from another location in 1956.



funding available and the cost effectiveness of the solution. The goal is to maintain the existing 2,300 beds within the cantonment.

The general neighborhood land use pattern would remain the same to maintain unit-level integrity and walkability. All replacement buildings would still be single story. The larger company barracks would result in a more efficient use of space and would be more cost effective to maintain on a square foot basis (e.g., proportionally less total roof and wall area to total gross square feet). The larger buildings could only be considered if the Army is able to access military construction funding; otherwise, it will need to proceed with the one-for-one replacement approach, which it can fund through its SRM program.

#### **2.3.2.2 Utility Improvements (Not Part of Proposed Action)**

As noted previously, the proposed wastewater, stormwater, electrical lines, lightning protection and telecommunications FIP projects were reviewed and documented through Records of Environmental Consideration (REC) and are now underway or being scheduled for construction. These underway projects are described in the following paragraphs.

Wastewater (Figure 2-3):, The project area is served by an aging sewer system that is in the process of being replaced by individual wastewater systems (IWSs). The FIP includes seven septic tanks and seven absorption beds, to spread out the discharge points that would be developed in three phases (Figure 2-3). The design flowrate of 24,405 gallons per day (gpd) based on average troop training of 832 personnel is about the same as the existing flowrate of between 25,000 and 33,000 gpd.

As part of the FIP upgrade, all existing septic tanks, leaching wells, and seepage pits are being removed and disposed of. All existing seepage pits and cesspools will be cleaned by removing any solids then backfilled with gravel and abandoned. As a final abandonment procedure, the cesspool covers and cesspool walls will be demolished four feet below grade and backfilled with soil. New sewer lines and manholes will be installed within the existing roadways. New sewer laterals will be connected to each building where wastewater is generated. The Hawaii State Department of Health has approved the proposed cantonment sewer system concept design.

The proposed IWS systems will eliminate direct discharge of untreated wastewater to cesspools and will provide a system that can be readily maintained and operated. Properly maintained septic tanks will provide better wastewater treatment prior to discharging treated wastewater into the ground. The REC for Repair of Sewer Collection System at PTA was dated April 12, 2016, and the improvements are underway.



Figure 2-3: Conceptual Wastewater Plan

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1 Stormwater Drainage (Figure 2-4). During periods of heavy rain, the cantonment area has  
2 been subjected to flooding conditions in several areas. For example, stormwater from the east  
3 of the cantonment sheet flows across the cantonment leading to pockets of flooding within the  
4 barracks, roadways, and surrounding areas. The planned improvements are divided into  
5 sectors: north and south. A large riprap lined channel will be constructed on the east side of  
6 the cantonment to intercept the stormwater from the east and divert the flow to the south and  
7 away from the cantonment buildings. Another area of concern is between the individual  
8 barracks. Due to poor drainage systems, ponding occurs, which floods the interiors of some  
9 barracks. To alleviate the flooding, graded swales between each row of barracks would be  
10 constructed to direct the flows to new concrete-lined swales running parallel to the existing  
11 access roads draining to individual dry wells. The proposed storm system improvements have  
12 been reviewed under Records of Environmental Consideration and are now underway or are  
13 being scheduled for construction.<sup>4,5</sup>

14 Electrical Lines: The existing secondary power system for the cantonment area consists of  
15 overhead poles and wires and pole mounted transformers with a few pad-mounted  
16 transformers. The proposed changes will essentially convert it to an underground system,  
17 protected from environmental factors and decluttering the mass of overhead wires that have  
18 been installed over the past number of decades. The new underground system would consist  
19 of a network of manhole/handhole/ducts connected to new pad-mounted transformers that  
20 will feed the individual buildings. When the work is complete, the overhead poles supporting  
21 the secondary service lines will be removed. Electrical and telecommunications upgrades  
22 have been reviewed under a July 2017 Record of Environmental Consideration.<sup>6</sup>

23 Lightning Protection: The lightning protection system for the primary electrical overhead  
24 distribution system will also be upgraded (also covered under the July 2017 REC).

25 Telecommunications: The majority of the existing telecommunication system for the  
26 cantonment area consists of overhead wiring running on shared power/telecommunication  
27 poles. The new system would consist of a new underground manhole/handhole/duct system  
28 providing telecommunication connections to the individual buildings. When the work is  
29 complete, all of the overhead telecommunication wiring and associated poles will be removed  
30 (also covered under the July 2017 REC).

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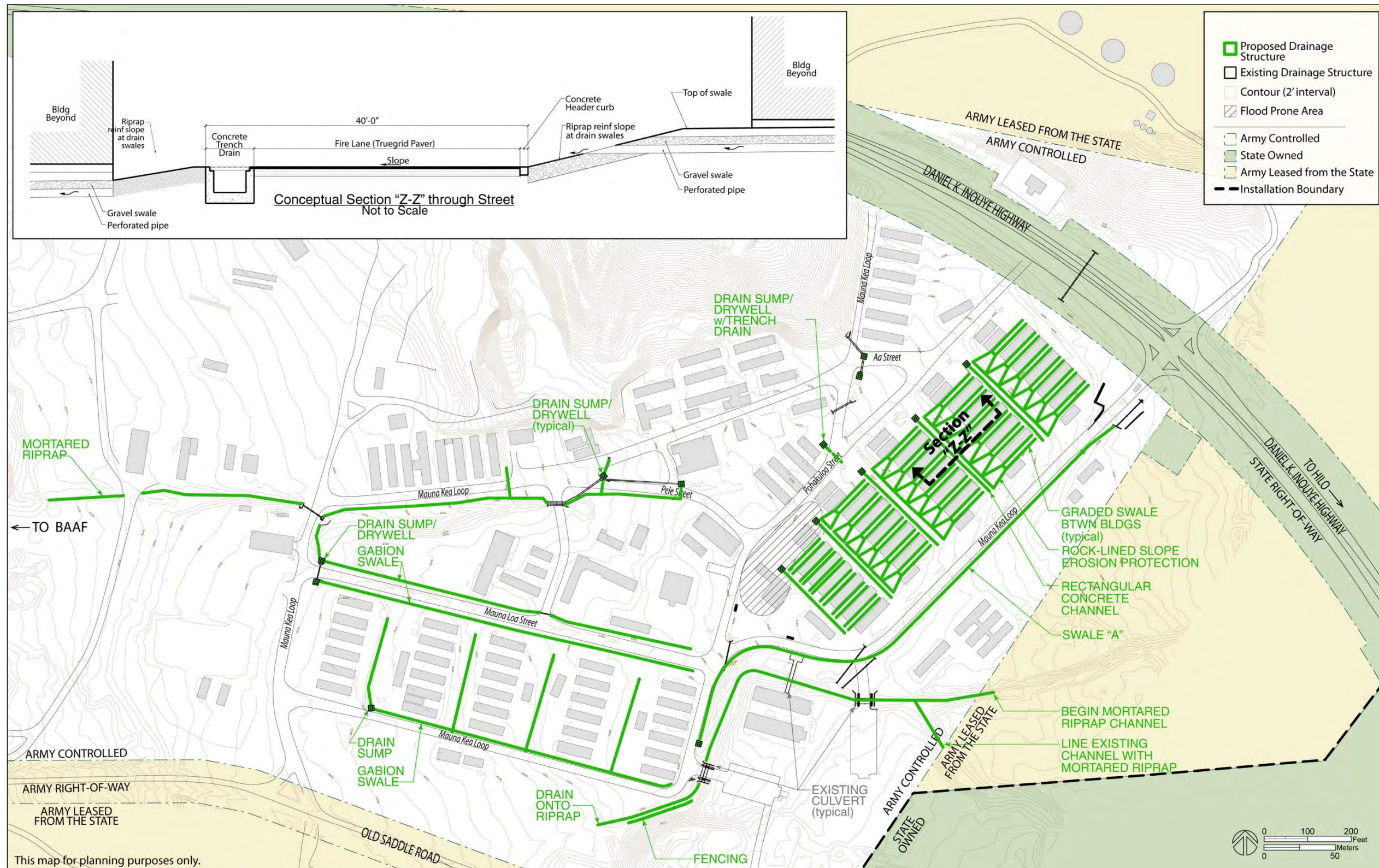
<sup>4</sup> Record of Environmental Consideration for Repair Cantonment Drainage (South), PTA, USAG-HI, April 12, 2016.

<sup>5</sup> Record of Environmental Consideration for Repair Cantonment Utility System, PTA, USAG-HI, July 20, 2017.

<sup>6</sup> Record of Environmental Consideration for Repair Cantonment Utility System, PTA, USAG-HI, July 20, 2017.

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**Figure 2-4: Conceptual Stormwater Drainage Plan**



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### 2.3.3 Avoidance and Minimization Measures

#### 2.3.3.1 **Construction Best Management Practices**

Best management practices (BMP) would be employed during demolition and construction of building improvements to avoid or minimize adverse impacts to the environment. Typical construction period BMPs include the following:

- Erosion and sediment control measures such as protection of erodible soils; mechanical control of stormwater runoff from the construction site; use of sediment basins; and use of vegetation and mulch on soil exposed by grading.
- Employment of personnel qualified to identify and handle hazardous materials if unexpectedly encountered.
- Use of personal protective equipment (PPE) (e.g., protective clothing, eye protection, and respirators) during pipe removal activities to protect personnel from lead containing paint. Implementation of appropriate procedures to contain dust and paint chips that may be loosened during pipe removal activities.
- If contaminated soil is suspected, it will be tested, stored and disposed of at an appropriate waste facility.
- Implementation of fugitive dust control measures during the construction period, including during non-working periods. Measures may include sprinkling or treating the soil with dust suppressants at the site, haul roads, and other areas disturbed by operations.
- Preparation and implementation of a dirt and dust control plan that identifies the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.
- Cleaning and inspecting all construction vehicles and equipment before moving onto the worksite to prevent the spread of invasive species. Prior to construction, the PTA Natural Resources Office (NRO) will provide briefing materials to ensure inspections are conducted effectively.
- Preparation and execution of a Construction Management Plan to avoid and minimize potential impacts of multi-year, on-post construction activities and ensure construction activities do not degrade readiness or soldier quality of life.
- Best management practices will also be identified as conditions of the National Pollutant Discharge Elimination System (NPDES) permit required for the discharge of stormwater associated with construction activity, including a Storm Water Pollution Prevention Plan (SWPPP).

#### 2.3.3.2 **Measures for Biological Resources**

The following avoidance and minimization measures will be implemented during project construction to avoid adverse impact to biological resources, in accordance with Section 7, Endangered Species Act (ESA) consultation with the U.S. Fish and Wildlife Service (USFWS) (see Appendix B).

- Construction personnel will remain aware of potential for presence of the Hawaiian goose (*Branta sandvicensis*). If the Hawaiian goose is present during construction,

- 1 crews will be educated on how to work safely around them. All speed limits will be  
2 followed and enforced.
- 3 • Tree trimming and removal will be avoided during Hawaiian hoary bat (*Lasiurus*  
4 *cinereus semotus*) breeding season, June 1 through September 15. All construction  
5 activities will take place during daytime. UFC standards for outdoor lighting will be  
6 followed.
- 7 • When the existing building adjacent to interpretive garden is demolished, garden is to  
8 remain intact.
- 9 • USFWS recommends that if construction activity may disturb non-native tree tobacco  
10 (*Nicotiana glauca*), the host plant for the Blackburn's sphinx moth (*Manduca*  
11 *blackburni*), contact USFWS for additional guidance.
- 12 • Although there are currently no Yellow-faced bees (*Hylaeus anthracinus*) in the  
13 cantonment, PTA is encouraged to continue surveying its property for this species.

#### 14 2.3.3.3 **Measures for Invasive Pest Prevention**

15 Invasive Pest Prevention Standard Operating Procedures (IPPSOP) have been established to  
16 prevent the introduction of harmful invasive pests including reptiles, amphibians,  
17 invertebrates, weeds, and rapid ohia death (ROD) into PTA.

- 18 • All work vehicles, machinery, and equipment must be clean and free of debris prior to  
19 entering the PTA.
- 20 • Inspection of work vehicles, machinery, and equipment for invasive ants prior to  
21 entering the PTA.
- 22 • Auxiliary construction support sites (ACSS) and staging areas within the PTA must be  
23 kept free of invasive pests.
- 24 • All cutting tools must be sanitized to prevent rapid ohia death (ROD).
- 25 • Landscaping: new construction and land management projects will use native  
26 Hawaiian plants for landscaping to the extent practical.
- 27 • All project personnel, including subcontractors, must receive a PTA NRO briefing or  
28 review NRO-provided briefing materials prior to project implementation.

## 29 2.4 **Alternatives Considered But Not Carried Forward for Detailed Analysis**

30 The following alternatives were considered but not carried forward for detailed analysis in  
31 this EA as they did not meet the purpose and need for the project and satisfy the reasonable  
32 alternative screening factors presented in Section 2.2.

### 33 2.4.1 Relocate Out of BAAF Accident Potential Zone

34 One alternative considered was to relocate cantonment activities to the north and south of the  
35 area encumbered by the Bradshaw Army Airfield (BAAF) Accident Potential Zone (APZ) and  
36 Imaginary Surfaces (but still within project area). The 40:1 Approach Departure surface and  
37 7:1 Transitional surface associated with aircraft operations at BAAF cross through the center  
38 of the project area (Figures 1-3 and 2-1) leaving areas to the north and south available for  
39 new construction. The project area is also located in Accident Potential Zone (APZ) I (areas at

1 either end of a runway where an aircraft mishap is most likely to occur if one occurs). Most of  
2 the buildings and terrain features within the project area penetrate into the imaginary  
3 surfaces plane.

4 The cantonment and airfield were constructed prior to adoption of current airfield land use  
5 regulations. The land use incompatibility described above is effectively managed by  
6 restricting aircraft operations on the east end of the airfield (i.e., restricting approaches and  
7 departures over the project area). The limited size and terrain restrictions of the project area  
8 make it very difficult to undertake major new phased construction outside of the APZ without  
9 significantly affecting Mission Readiness (Screening Factor 3) and the use of SRM funds (not  
10 available for new construction) (Screening Factor 1). Moreover, the proposed action  
11 (modernization of cantonment facilities and infrastructure) is consistent with a permanent  
12 waiver granted by the U.S. Army Aeronautical Services Agency dated October 12, 2017, so  
13 land use incompatibility is no longer a factor.

#### 14 **2.4.2 Construct New Facilities at a New Site**

15 Instead of renovating and reconstructing the existing developed area of the cantonment, one  
16 alternative considered was to construct a replacement campus in an adjacent area. A new  
17 campus would meet all current DoD planning and design criteria and building codes, and  
18 would no longer be constrained by BAAF APZ or imaginary surfaces. Construction of the new  
19 cantonment could occur without affecting the mission readiness of the existing cantonment  
20 (Screening Factor 3). The new cantonment site would need to be located within Army owned  
21 land (Screening Factor 2); and the only land within the Army-owned cantonment not  
22 constrained by BAAF APZ, imaginary surfaces, and other operational commitments is the 192-  
23 acre area to the south of BAAF and Old Saddle Road. This area is currently constrained by  
24 ammunition holding areas and other types of military hazard zones that would need to be  
25 removed affecting Mission Readiness (Screening Factor 3). This alternative would require a  
26 significant investment in building and infrastructure and therefore, would not meet Screening  
27 Factor 1 (Fundability). For these reasons, this alternative was dismissed from further  
28 consideration.

### 29 **2.5 Summary of Potential Impacts to Resource Areas**

30 The effects that the preferred alternative and no-action alternative would have on various  
31 facets of the biological and manmade environment are summarized in Table 2-1 from the  
32 analysis provided in Chapter 3. Potential impacts associated with the construction and  
33 operational phase are covered separately when warranted.



1 **Table 2-2: Summary of Potential Impacts by Resource Area**

| Resource Areas         | No-Action Alternative                                                                                                                                                                                                                                                                                             | Preferred Alternative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Land Use Compatibility | Significant Impact. The deteriorating condition of the cantonment buildings would likely result in the temporary and/or permanent loss of some facility functions and increasing use of trailers and portable structures that would intrude into existing open spaces and thereby reduce operational flexibility. | <p><u>Construction</u>: Less than significant. Construction best management practices will be used and activities will be phased and managed to minimize impact to residential, administrative and troop support functions.</p> <p><u>Operation</u>: No Impact</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                                                                                                                                                                                                                      |
| Traffic                | No Impact.                                                                                                                                                                                                                                                                                                        | <p><u>Construction</u>: Less than significant impact. Vehicle trips by construction workers, deliveries of construction materials, and transfer of construction waste to appropriate offsite facilities would have a short-term, non-significant effects of traffic on public roadways. Construction contractors will be instructed to manage vehicles and equipment in a manner that does not disrupt cantonment operations.</p> <p><u>Operation</u>: No impact. No change in vehicle trip generation as a result of the proposed action; therefore, no effect on public roadways.</p> <p><u>Cumulative</u>: Less than significant impact.</p> |
| Cultural Resources     | No impact.                                                                                                                                                                                                                                                                                                        | <p><u>Archeological Resources</u>: No impact. SHPO has concurred with the Army's determination of "no historic properties affected" by ground disturbing activities associated with the implementation of the preferred alternative [Log No. 2016.00353, Doc No. 1603MB37].</p> <p><u>Architectural Resources</u>: No impact. Quonset huts demolished as part of the proposed action are not eligible for inclusion on the National Register of Historic Places as a district. . The Keeper of the National Register</p>                                                                                                                        |

| Resource Areas                     | No-Action Alternative                                                                                                              | Preferred Alternative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    |                                                                                                                                    | <p>agreed on January 18, 2018 and the SHPO concurred with determination of “no historic properties affected” on March 20, 2018 [Log No. 2018.00547, Doc No. 1803MB06].</p> <p><u>Cumulative:</u> Less than significant impact.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Biological Resources               | No impact.                                                                                                                         | <p><u>Construction and Operation:</u> Less than significant impact. Per Section 7, Endangered Species Act (ESA) consultation, USFWS concurred with the Army’s determination that with the implementation of minimization measures, the preferred alternative is “not likely to adversely affect” the Hawaiian goose, Hawaiian hoary bat, Hawaiian seabirds, and listed plant species in the interpretive garden. Recommended minimization measures are detailed in Section 3.4.</p> <p>No impact on other biological resources. USFWS has determined that there will be “no effect” for Blackburn’s sphinx moth and Yellow-faced bees.</p> <p><u>Cumulative:</u> Less than significant impact with minimization measures.</p> |
| Noise                              | No impact.                                                                                                                         | <p><u>Construction:</u> Less than significant impact. Temporary increase in ambient noise from construction activities, equipment, machinery, and vehicles would be minimized with construction BMPs and compliance with State of Hawaii community noise control standards.</p> <p><u>Operation:</u> No impact; no change in operational activities or associated noise levels.</p> <p><u>Cumulative:</u> Less than significant impact.</p>                                                                                                                                                                                                                                                                                   |
| Natural Hazards, Geology and Soils | Minor beneficial impact due to ongoing FIP drainage repairs that are proceeding under no-action alternative. Will address flooding | <p><u>Construction:</u> Less than significant impact. Slightly sloping, previously developed site will require minimal site preparation/grading since existing building pads will be reused. Temporary effects from fugitive dust and soil erosion and sedimentation will be avoided or minimized through dust control</p>                                                                                                                                                                                                                                                                                                                                                                                                    |

| Resource Areas                       | No-Action Alternative                                                                                                                                                                                                                                | Preferred Alternative                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | <p>which has caused soil erosion in the past.</p> <p>During construction of drainage and utility improvements, impacts to soils will be less than significant.</p>                                                                                   | <p>BMPs (see air quality discussion below) and compliance with NPDES permit conditions regarding construction-period erosion and sedimentation control.</p> <p><u>Operation</u>: No impact. No change to land use, intensity of use, etc.</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                                                                  |
| Air Quality                          | No impact.                                                                                                                                                                                                                                           | <p><u>Construction</u>: Less than significant impact. Construction equipment and activities have the potential to generate fugitive dust and fossil fuel emission. These will be avoided or minimized through dust and emission control BMPs.</p> <p><u>Operation</u>: No impact.</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                          |
| Water Resources                      | <p>Minor beneficial impact due to ongoing FIP drainage, water and wastewater improvements that are proceeding under no-action. FIP improvements will reduce stormwater runoff and erosion; and increase water and wastewater system efficiency.</p>  | <p><u>Construction</u>: No impact. NPDES stormwater permit BMPs will be implemented by the construction contractor to avoid impacts to water resources, including groundwater resources.</p> <p><u>Operation</u>: No impact.</p> <p><u>Cumulative</u>: No impact.</p>                                                                                                                                                                                                  |
| Public Facilities and Infrastructure | <p>Ongoing FIP improvements to drainage, water, wastewater, electrical and tele-communications will have a beneficial impact on facilities and infrastructure. Modernized and more efficient systems, will improve efficiency and reduce ongoing</p> | <p><u>Construction</u>: Less than significant impact on public facilities (construction and demolition, landfill waste, county and state roads). USAG-HI and County of Hawaii waste reduction goals will promote recycling and other strategies to minimize construction and demolition waste deposited in the landfill.</p> <p>Temporary interruption in service will inconvenience onsite personnel but will not be sufficient to degrade operational readiness.</p> |

| Resource Areas                 | No-Action Alternative                                                                                                                                            | Preferred Alternative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | maintenance costs.                                                                                                                                               | <p><u>Operation</u>: No impact on island-wide public facilities and infrastructure. Beneficial impact on Army facilities and services.</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Socioeconomics                 | Ongoing FIP utility improvements have short-term beneficial impact due to construction jobs and spending.                                                        | <p><u>Construction</u>: Short-term beneficial impact. The preferred alternative will generate construction-related jobs and spending.</p> <p><u>Operation</u>: No impact on economic factors, but beneficial impact on Soldier morale and quality of life.</p> <p><u>Cumulative</u>: Beneficial cumulative impact.</p>                                                                                                                                                                                                                                                                                                                                                                |
| Visual Resources               | FIP utility improvements will remove overhead utility lines and will have beneficial visual impact.                                                              | <p><u>Construction</u>: Less than significant impact. Construction equipment such as bulldozers, backhoes, and cranes in the cantonment may occasionally be visible to the public from DK1 Highway. These impacts will be temporary.</p> <p><u>Operation</u>: Beneficial visual impact due to the replacement of aging Quonsets with new visually coordinated buildings. Combined with the (previously approved) removal of overhead utility lines, the visual clutter of the existing cantonment will be reduced and appearance improved. There will be no impact on the important views toward Mauna Loa and Mauna Kea.</p> <p><u>Cumulative</u>: Less than significant impact.</p> |
| Toxic and Hazardous Substances | Less than significant impact. Any Hazardous materials encountered during FIP utility improvements will be handled in accordance with all applicable regulations. | <p><u>Construction</u>: Less than significant impact. Hazardous materials would be tested for, collected and disposed in accordance with all applicable regulations.</p> <p><u>Operation</u>: No impact to toxic and hazardous substances during the operational period as the facility use tempo and resultant HAZMAT and hazardous waste generation would not change.</p> <p><u>Cumulative</u>: Less than significant impact.</p>                                                                                                                                                                                                                                                   |

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### 3 Affected Environment and Environmental Consequences

This section describes the affected environment and environmental consequences for each resource area. The affected environment sections describe existing resources and environmental conditions at the project site and in the surrounding area. These conditions form the baseline for analyzing the environmental consequences of the preferred alternative and the no-action alternative.

All potentially relevant resource areas were initially considered for analysis in this EA. In compliance with NEPA, CEQ, and 32 CFR part 651 guidelines, the discussion of the affected environment focuses only on those resource areas potentially subject to impacts. Additionally, the level of detail used in analyzing a resource is commensurate with the anticipated level of potential environmental impact. Temporary or short-term effects (i.e., related to construction activities) and operational or long-term effects (i.e., after construction is over) were analyzed for each resource area and classified in one of four impact categories:

- Significant impact
- Less than significant impact
- No impact
- Beneficial impact

Under the no-action alternative, FIP infrastructure improvements which have already been approved and are proceeding will be completed. The preferred alternative involves the modernization of cantonment building facilities through redevelopment and renovation, without changing the basic urban form, land use, cantonment capacity or training tempo. For the most part, proposed redevelopment would occur within the footprints of existing development and would be confined within the physical limits of the existing Army-owned cantonment. Accordingly, there are no operational period impacts of the preferred alternative (i.e., no increase to capacities of offsite sewer, water, and power systems and no net increase in vehicle trips).

Based on the scope of the preferred and no-action alternatives, resource areas analyzed in detail include the following:

- Land Use Compatibility
- Traffic
- Cultural Resources
- Biological Resources
- Noise
- Natural Hazards, Geology and Soils
- Air Quality
- Water Resources
- Public Facilities and Infrastructure



- 1       • Socioeconomics
- 2       • Visual Resources
- 3       • Toxic and Hazardous Substances
- 4



5       **Figure 3-1: View of Project Area from Puu Pohakuloa looking toward Mauna Loa**

## 6       **3.1 Land Use Compatibility**

### 7       3.1.1 Affected Environment

8       PTA is located in a remote and rural area of Hawaii Island, 40–50 miles away from the major  
9       urban areas of Hilo, Waimea, and Kona. The nearest public use is the 21-acre Mauna Kea  
10      Recreation Area approximately 0.7 miles east of the cantonment; the private Waikii Ranch  
11      residential community is approximately 13 miles to the northwest (Figure 1-2). The State of  
12      Hawaii permits recreational hunting on public lands surrounding PTA.

13      Bradshaw Army Airfield (BAAF), an Army-owned Class A airfield, is located about 0.5 miles to  
14      the west of the project area. Part of project area is located within the BAAF Accident Potential  
15      Zone (APZ) extending from the east end of the 3,700-foot runway (see Figures 1-2 and 1-3).  
16      To manage potential aircraft accident risks, take offs and landings over the project area are  
17      prohibited; all take offs and landings are toward the west, away from the developed area of  
18      the cantonment. The proposed action is consistent with a permanent waiver granted by the  
19      US Army Aeronautical Services Agency.

20      The project area is organized like a small town (Figure 1-3 and Figure 3-1). It includes a  
21      narrow street network serving a series of neighborhoods or blocks consisting of facilities to  
22      support troop training:

- 23      • Company-level barracks and support services (latrines, shower points, and  
24      headquarters)
- 25      • Battalion (BN)-level facilities (including dining facilities, and headquarters and first  
26      aid stations, etc.)
- 27      • Task force-level headquarters and support facilities.

Another set of facilities are dedicated for permanent party use and general use including the Garrison Headquarters, administrative and shop facilities, a fitness center, a sundry store, a chapel, and a large industrial area.

All the buildings are single story. Existing cantonment roadways do not include sidewalks, and pedestrians must walk in the roadway. Electrical service and most of the communications utilities are strung on overhead poles.

From state and local government perspectives, the cantonment is located in the General Subzone of the State Conservation District and within the Conservation category of Hawaii County's General Plan Land Use Pattern Allocation Guide Map (generally following the mapping of the State Conservation District). Regulatory authority over lands under federal control is retained by the federal agency, in this case the Army.

### **3.1.2 Environmental Consequences**

The no-action alternative would have a significant impact on land use as the deteriorating condition of the buildings and infrastructure would likely result in the temporary and/or permanent loss of some facility functions and increasing use of trailers and portable structures that would intrude into existing open spaces and thereby reduce operational flexibility. Although FIP utility upgrades will be complete, they will have no impact on land use compatibility.

The preferred alternative would modernize cantonment buildings, but there would be no change to land use or residential capacity. The cantonment would serve the same training population. The existing cantonment buildings would either be replaced with similar sized, single story concrete masonry unit (CMU) buildings with simple gable roofs, or larger, single story structures. The existing street network would remain. For the most part, proposed redevelopment would occur within the footprints of existing development and would be confined within the limits of the existing cantonment.

Construction impacts would be less than significant. Construction would be phased over an eight-year period and would not compromise operational readiness. Construction would still require siting of temporary construction laydown spaces, internal road closures and utility service interruptions that may result in some level of disruption to onsite personnel, but this would be a less than significant impact.

## **3.2 Traffic**

### **3.2.1 Affected Environment**

Several types of vehicular traffic are generated by activities at PTA: range-related exercises; traffic associated with the permanent party personnel employed at the cantonment; traffic associated with vendors and guests; and construction vehicles. Each type of vehicle traffic and potential effects is discussed in the following paragraphs.

Range-related activities are not part of the proposed action and are, therefore, not analyzed in this EA. Traffic-generating activities include Soldiers bused to PTA from either Hilo or Kona International Airports to participate in training operations, equipment and materiel delivered via vehicle convoys from the Army's landing ramp at Kawaihae Harbor (e.g., vehicles, equipment, and ordinance), and range-related construction traffic. Convoys typically access

PTA via the convoy gate at the west intersection of Old Saddle Road and Daniel K. Inouye (DKI) Highway.

Other traffic is associated with PTA employees. Approximately 119 permanent party personnel and 77 contract personnel are assigned to PTA, with the majority working at the cantonment. PTA staff commute from Hilo, Kona, Waikoloa, Waimea, and other Hawaii Island residential communities via public roads and, ultimately, via the DKI Highway. The DKI Highway experienced an average daily traffic (ADT) volume of approximately 4,000 vehicles in 2016, with 19,500 vehicles per day projected by 2035 (Saddle Road Extension DEIS 2017). Traffic volumes associated with PTA commuting employees are very small compared to the overall DKI Highway ADT. Standard cantonment working hours are from 6:30 a.m. to 3:30 p.m., Monday–Friday. Police, emergency medical services (EMS), and airport crash/rescue teams maintain 24 hours/7 days per week schedules. Private vehicles access the cantonment from the DKI Highway via the main gate. The preferred alternative will not increase the number of permanent party assigned to PTA, so there would be no change to existing cantonment-generated traffic.

PTA vendors include water and food delivery vehicles and construction vehicles working on the ranges and project area repair and maintenance activities.

### 3.2.2 Environmental Consequences

The no action alternative will have no impact on traffic on public roads because there is no foreseeable change to training range usage or number of permanent party assigned to PTA.

The construction of the preferred alternative would be phased over an eight-year period to maintain operational readiness (could be longer depending on funding availability). Phasing would reduce the number of construction vehicles travelling to and from the site at any one time (versus one large construction project). Typically, large construction vehicles (e.g., tractors, graders, rollers, and cranes) are moved to the site at the beginning of the construction period and removed at the end of the construction, so daily traffic would primarily be associated with construction workers commuting in personal vehicles. It is anticipated that this traffic would be generated from the east (Kailua-Kona) and west (Hilo) sides of the island and, thus, would be attenuated by distributing the trips over a wider network of roadways.

The overall FIP project is estimated to generate an average of 261 onsite construction jobs per year over the eight-year construction period (see employment projection discussion in Section 3.10 Socioeconomics). Construction contractors will be required to comply with a USAG-HI construction management plan (CMP) that will establish requirements including limiting construction-related vehicular activity to outside of peak traffic periods, staging locations for construction-related workers and vehicles, and other BMP measures related to traffic. These measures will ensure base security is not compromised and onsite traffic levels are maintained at acceptable levels of service. The CMP will mitigate any construction-period traffic management issues to less than significant levels.

There would no impact on operational period traffic levels for the same reason as discussed under the no-action alternative.

### 3.3 Cultural Resources

This discussion of cultural resources includes prehistoric and historic archaeological sites; historic buildings, structures, and districts; and physical entities and manmade or natural features important to a culture, a subculture, or a community for traditional, religious, or other reasons. Cultural resources are discussed in Section 3.3.1 and are designated in these major categories:

- Archaeological resources (prehistoric and historic) are locations where human activity measurably altered the earth or left deposits of physical remains.
- Architectural resources include standing buildings, structures, landscapes, and other built-environment resources of historic or aesthetic significance.

#### 3.3.1 Affected Environment

##### 3.3.1.1 *Early History*

PTA is part of larger cultural landscape that includes Mauna Kea, Mauna Loa, and the Saddle area between them (Booz Allen Hamilton 2011). Prior to becoming a military installation, PTA and the surrounding landscape was used by Native Hawaiians for a variety of purposes that included quarrying and stone tool manufacture, bird hunting, human burial, shrine construction, journeying (huakai), hunting of feral ungulates, scattering of cremation remains, ranching, and Native Hawaiian religious and cultural purposes.

Current archaeological understanding is that Hawai'i Island was settled about A.D. 1200 (Reith et al 2011). The first Polynesian settlers of South Kohala arrived and established fishing villages and cultivated taro along streams at the base of the Kohala Mountains (Department of the Army, 2011). The coastal village of Kawaihae was the site of one of Kamehameha I's primary residences and became the location of two major heiau: Mailekini, and Puukohola which was completed under his rule in 1791. Throughout the 1800s, Kawaihae was a major shipping port for sandalwood, among other goods, from the slopes of Mauna Kea and cattle from Parker Ranch (Department of the Army 2011).

##### 3.3.1.2 *Ranching History and Use*

In the late 1800s, cattle and sheep ranchers utilized land within PTA and its immediate environs. In addition to cattle- and sheep-ranching operations, related activities and land uses included hunting, and the construction of trails, wagon roads, stone walls, and fence lines (U.S. Army Environmental Command, 2013). A portion of the road that connected a sheep station from Humuula to the harbor in South Kohala, is located within and to the east of PTA (ibid). Stone walls and foundations constructed in the 1890s, may also remain in the northeastern part of PTA. Ranching-era fence lines and associated stone foundations extend across PTA's northern training areas and into the Keamuku Maneuver Area (KMA) (ibid).

##### 3.3.1.3 *U.S. Military History and Use*

The following is an overview of the military history of PTA extracted from An Architectural Survey and Evaluation of the Cantonment Area at the Pohakuloa Training Area (Hayes 2002 with 2015 addendum).

The U.S. Marine Corps (USMC) initiated training at PTA as early as 1943 and the Army took over with the construction and management of PTA. During World War II, live-fire training continued but not on a regular basis until 1943. In 1942, the Army constructed Kaumana

Road, now known as the DK1 Highway, in an effort to improve military transport access between Hilo and Waimea. From 1943-1955, Soldiers trained at PTA on a routine basis while billeting in temporary tent encampments. A number of relatively small outhouses were also constructed during the same time period, but were demolished in 1962.

From 1955-1958, the Army's 65th Engineer Company erected Quonset huts at PTA. The predecessor to the Quonset hut was developed to house British Soldiers during World War I and as emergency housing for civilians in London during World War II. During World War II, the U.S. Navy (USN) commissioned construction of an American version, manufactured at Quonset Point, Rhode Island. The Quonset hut was valued for durability, ease of assembly, and portability. The distinctive round-walled structures are used at PTA as barracks, administrative offices, recreational facilities, and for a variety of other purposes.

During World War II, thousands of U.S. Soldiers were shipped in and out of Kawaihae Harbor. At the southern end of the bay, amphibious landing exercises were conducted and military emplacements set up in the area of Puukohola Heiau. A deep draft harbor project, including a main breakwater and military landing ramp project was completed at Kawaihae by the Territory of Hawai'i and the U.S. Army Corps of Engineers (USACE) in 1959.

#### 3.3.1.4 *Traditional Cultural Properties*

A traditional cultural property (TCP) is a property that is eligible for inclusion in the National Register of Historic Places (NRHP) because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.<sup>7</sup>

The information provided below, summarizes the findings of an ethnographic report prepared by Pacific Consulting Services, Inc. (PCSI 2012) (U.S. Army Environmental Command 2013). The report evaluated the potential existence of TCPs at PTA and concluded that no areas within PTA appear to qualify for consideration as a TCP under U.S. National Park Service (NPS) criteria (U.S. Army Environmental Command 2013).

No TCPs have been identified within PTA although two studies have attempted to identify some, and none of the sites have been classified as National Historic Landmarks.

The study evaluated information from consultations with knowledgeable cultural consultants raised in Waimea and information gleaned from previous works by McEldowney (1982), Maly and Maly (2005), Langlas, et al. (1998), Maly (1999), Maly 2002, and Maly (2005). Traditional and contemporary cultural practices associated with the Saddle Region and PTA, included: (US Army Environmental Command 2013a).

- Quarrying and stone tool manufacture
- Bird hunting
- Human burial
- Shrine construction
- Journeying (Huakai)

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<sup>7</sup> Parker, Patricia L. and King, Thomas F., *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties*, U.S. Department of Interior, National Park Service, 1998, p. 1.

- 1       • Hunting of feral ungulates
- 2       • Scattering of cremation remains
- 3       • Ranching

4 Consultants for the PCSI study reported the presence of human burial from observation and  
5 oral traditions, but did not provide exact locations (U.S. Army Environmental Command  
6 2013). Human burials have not occurred at PTA during modern times, and active community  
7 burial traditions at PTA have not been identified. Cultural informants also reported the  
8 continued use of old trails that crossed PTA and the persistence of bird hunting, one of the  
9 major traditional uses of the area from prehistoric times into the early part of the twentieth  
10 century (ibid).

11 Research conducted by Maly (1997; Maly & Maly, 2005) involved interviews that considered  
12 Mauna Kea and associated the landscapes and view planes. The researchers surmised that  
13 Native Hawaiians may feel a "deep cultural attachment to the broad spectrum of natural and  
14 cultural resources" found in and around Mauna Kea (Maly 1999, 3) and recommended that  
15 the traditions, sites, practices, and continuing significance of Mauna Kea make it "eligible for  
16 nomination as a traditional cultural property under federal law and policies" (Maly 1999, 3  
17 cited in US Army Environmental Command 2013a). As noted above, subsequent work by  
18 Pacific Consulting Services, Inc. (PCSI, 2012) concluded that no areas within PTA appear to  
19 qualify for consideration as TCPs under U.S. National Park Service (NPS) criteria.

20 Archaeological resources: To-date, there are over 1,200 recorded archaeological sites at PTA,  
21 including at the KMA. These include prehistoric Native Hawaiian sites and historic sites  
22 related to a variety of activities in the area including ranching (Department of Army 2016).  
23 About 21% of the recorded sites are lava tube shelters, located primarily in the 109,000 acres  
24 of the main part of PTA. There is one lava tube site in KMA. The remaining sites at PTA include  
25 cairns, mounds, trails, surface structures, rock quarrying areas, platforms, and features  
26 related to 19th and 20th century activities (Department of Army 2016). In 1986, the Bobcat  
27 Trail Habitation Cave on the southwest corner of the range was listed on the National Register  
28 of Historic Places. Thirty-six other sites have been determined to be eligible for the National  
29 Register while 323 have been determined not eligible for the National Register. The  
30 remaining sites are treated as eligible and possible impacts are avoided until eligibility can be  
31 determined (Department of Army 2016). Evaluations for National Register eligibility are  
32 currently under way for all sites identified in the KMA (ibid).

33 A number of archeological surveys within the cantonment (including the project area) have  
34 been undertaken by the PTA Cultural Resources Management Office (CRO), including some on  
35 the list below. Archeological monitoring has also been conducted for several projects. None of  
36 the archeological studies have identified any archeological deposits or archaeological sites.  
37 Due to the random sampling of the cantonment area during the course of these projects and  
38 the consistency of soils across the areas, it is reasonable to conclude that the unsurveyed  
39 areas do not contain historic properties.

- 40       • Archaeological and Historical Spot Monitoring of Septic Tank System installation at  
41       Pohakuloa Training Area, Kaohe Ahupuaa, Hamakua District, Hawaii Island, Hawaii.  
42       October 13, 2006.



- 1 • Archaeological and Historical Spot Monitoring of propane pipe installation at  
2 Pohakuloa Training Area, TMK (3) 4-4-016:001, Kaohe Ahupuaa, Hamakua District,  
3 Hawaii Island, Hawaii. September 11, 2007 PTA CRO
- 4 • Archaeological and Historical Spot Monitoring of the Sprung Building excavation at  
5 Pohakuloa Training Area, TMK (3) 4-4-016:001, Kaohe Ahupuaa, Hamakua District,  
6 Hawaii Island, Hawaii. September 11, 2007
- 7 • Archaeological and Historical Survey of the Proposed PTA Cantonment Perimeter  
8 Fence, Kaohe Ahupuaa, Hamakua District (TMK: (3) 4-4-016:005; (3) 4-4-016:006;  
9 and (3) 4-4-016:010), Hawai'i Island. October 30, 2008
- 10 • Cultural Resources Monitoring of I3MP Subsurface Trenching, Pohakuloa Training  
11 Area, Island of Hawaii, Hawaii. TMK (3) 4-4-016:006. December 2008
- 12 • Monitoring of Waterline at Bradshaw Army Airfield (BAAF), Pohakuloa Training Area,  
13 Kaohe Ahupuaa, Hamakua District, Hawaii Island, Hawai'i [TMK: (3) 4-4-016:005].  
14 June 21, 2013

15 Architectural resources: The identification, evaluation, and documentation of potential  
16 architectural resources with the cantonment were evaluated in the Army's Architectural  
17 Survey and Evaluation of the Cantonment Area at Pohakuloa Training Area (Hayes 2002 with  
18 2015 addendum). Excerpts from this report are provided below.

19 Most of the building stock at PTA consists of Quonset huts, though there are also a few wood  
20 frame structures. Approximately 60% of the Quonset huts were erected between 1955 and  
21 1961, relocated from other sites around the Pacific. Given that the manufacture dates of the  
22 Quonset huts are generally a decade or more prior to their arrival at PTA, it is highly likely  
23 that they were previously used at other locations. Only a small fraction of the Quonset huts  
24 have been demolished during the past ten years.

25 Another building surge occurred at PTA between 1962 and 1969. During the 1970s, the base's  
26 building stock remained stable with another minor construction wave occurring during the  
27 1980s, and only a few structures were erected during the 1990s.

### 28 3.3.2 Environmental Consequences

29 A comprehensive evaluation of all FIP activities (both building and utility components) was  
30 conducted to determine potential impacts to cultural resources. Archaeological resources and  
31 architectural resources were evaluated separately, as discussed below. Separate Section 106  
32 consultations were held for archaeological resources and historic architectural resources.

33 Under the no-action alternative, FIP improvements to drainage, wastewater, electrical, and  
34 communication infrastructure will have been completed. The construction of FIP utility  
35 improvements was determined to have a less than significant impact on resources at or below  
36 ground surface level. See discussion below (Section 3.3.2.1, Archaeological Resources).

#### 37 3.3.2.1 **Archaeological Resources**

38 Both the FIP building components and utility components will involve excavation,  
39 surface grading and leveling, which have the potential to affect archaeological resources  
40 at or below the ground surface level. These activities were evaluated and determined to  
41 have no impact on cultural resources at or below ground surface level based on the

findings of previous archaeological surveys. The previous surveys did not identify any archaeological deposits or archeological sites in the area. During the Section 106 National Historic Preservation Act (NHPA) consultation, the State Historic Preservation Officer (SHPO) concurred with the Army's determination of "no historic properties affected."

Section 106 NHPA Consultation: Appendix A1 includes documentation of the Section 106 consultation for archaeological resources. The consultation for improvements to facilities "at or below ground surface level" was initiated by the Army by letter dated February 9, 2016, with the SHPO and other consulting parties. The Army determined that its proposed FIP improvements were an undertaking as defined in 36 CFR 800.16(y). The undertaking consisted of "repair and improvement to the electrical system, communications systems, wastewater disposal system, storm water drainage, reconfiguration and installation of fence lines and surface grading for parking and other uses at PTA." The February 9, 2016 consultation letter did not address proposed modifications to buildings, which was addressed in a separate consultation (see below). The Area of Potential Effect (APE) was defined to be approximately 536 acres, including the 80-acre project area and the Bradshaw Army Airfield (BAAF).

The Army's February 9, 2016 letter noted that portions of the APE have been the subject of previous archaeological surveys and that archaeological monitoring has been conducted for several projects. None of the previous archaeological projects identified any archaeological deposits or archaeological sites. Due to the random sampling of the APE by these projects and the consistency of soils across the area, the Army stated it was reasonable to conclude that the unsurveyed areas do not contain historic properties. The Army determined that there would be "no historic properties affected" by ground disturbing activities associated with the undertaking. By letter dated April 8, 2016, the SHPO concurred with the determination of no historic properties affected. Appendix A1 includes all the referenced Section 106 correspondence for archaeological resources. Because there are no historic properties affected, there will be no impact on archaeological resources.

#### 3.3.2.2 ***Architectural Resources***

The preferred alternative will result in the demolition of 123 structures in the project area, including Quonset hut barracks, administrative buildings, dining facilities, medical facilities, community buildings and industrial buildings. Buildings will be replaced with one-story CMU buildings. This has the potential to affect historic structures and historic districts, if present.

A 2002 architectural survey and evaluation concluded that none of the buildings were individually eligible for listing on the National Register of Historic Places, nor eligible as a district. During the Section 106 NHPA Consultation, the SHPO agreed with the Army's determination of "no historic properties affected."

Section 106 NHPA Consultation: Appendix A2 includes documentation of the Section 106 consultation for architectural resources. Section 106 consultation on the eligibility of all buildings within the project area was initiated by the Army via letter to the SHPO dated June 15, 2016. The APE was defined to be approximately 563 acres, including the 80-acre project area and BAAF. The letter noted that most of the buildings within the project area are Quonset huts.

In its June 15, 2016 letter, the Army cited its Architectural Survey and Evaluation of the Cantonment Area at Pohakuloa Training Area (Hayes 2002 with 2015 addendum). This study was prepared to fulfill the Army's requirement for identification, evaluation and documentation of the potential architectural resources within the APE. The letter also noted the Army has coordinated this undertaking with the Advisory Council on Historic Preservation (ACHP) in regards to the applicability of the Program Comment for Cold War Era Unaccompanied Personnel Housing, 1946–1974.<sup>8</sup> The ACHP confirmed the applicability of the Program Comment for most of the buildings at PTA. According to the Program Comment, the agency's requirements under Section 106 and the NHPA have been fulfilled in regards to those buildings. Several of the buildings at PTA are not covered under the Program Comment due to their use category code distinctions (e.g., coded for admin use as opposed to barracks use).

Based on the information from the 2002 architectural survey and the 2015 addendum, and subsequent consultations and analysis, the Army determined that none of the buildings at PTA are individually eligible for inclusion in the National Register. SHPO concurrence with the determination was requested. In follow on correspondence, the SHPO raised the issue of the eligibility of 34 buildings and of a potential historic district (including an additional 79 buildings), all within the APE. Additional information was requested by the SHPO and provided by the Army.

In accordance with federal regulations on determining the eligibility of historic properties [36 CFR 63.2 and 36 CFR 800.4(c)(2)], the USAG-HI sought the opinion of the Keeper of the National Register of Historic Places (the Keeper), in a letter dated June 27, 2017. The Keeper replied on August 17, 2017, stating that the 34 buildings in question were not individually eligible for listing on the National Register. In a January 18, 2018 Determination of Eligibility Notification, the Keeper stated that the potential PTA historic district was not eligible for listing in the National Register.

Given the Keeper's findings of non-eligibility for the individual buildings and a historic district, the USAG-HI again requested SHPO concurrence with its finding of "no historic properties affected" for the undertaking (via letter dated March 1, 2018). The SHPO concurred with the Army's determination in a letter dated March 20, 2018 (Log No:2018.00547, Doc No: 1803MB06). (See Appendix A2). Because there are no historic properties affected, the preferred alternative will have no impact on historic architectural resources.

### 3.4 Biological Resources

Biological resources include living, native, or naturalized plant and animal species and the habitats within which they occur. Plant associations are referred to generally as vegetation or flora, and animal species are referred to generally as wildlife or fauna. Habitat can be defined as the resources and conditions present in an area that support a plant or animal.

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<sup>8</sup> ACHP's "Program Comments" are an alternate method for federal agencies to meet their Section 106 obligations. By following this particular Program Comment, DoD and its Military Departments meet their responsibilities for compliance under Section 106 regarding the effect of the following management actions on Cold War era DoD unaccompanied personnel housing that may be listed or eligible for listing on the National Register of Historic Places: ongoing operations, maintenance and repair, rehabilitation, renovation, mothballing, ceasing maintenance activities, new construction, demolition, deconstruction and salvage, remedial activities, and transfer, sale, lease, and closure. Accordingly, DoD installations are no longer required to follow the case-by-case Section 106 review process for such effects.

Biological resources are divided into two major categories for purposes of this EA: (1) terrestrial vegetation and (2) terrestrial wildlife. Threatened, endangered, and other special status species are discussed in their respective categories.

### **3.4.1 Affected Environment**

#### ***3.4.1.1 Regulatory Setting***

The analysis of impacts from the proposed activities focuses on the biological resources that are protected under federal, state, or local laws and statutes. These laws and statutes include NEPA (42 USC 55 § 4321 et seq.), Endangered Species Act (ESA) (16 USC 35 § 1531 et seq.), Migratory Bird Treaty Act (MBTA) (16 USC 7 § 703-712 et seq.); Sikes Act Improvement Act (16 USC § 670a-670o), DoD Instruction 4715.03 (DoD 2011); Army Regulation 200-1 (U.S. Army 2007d), ESA Section 7 consultations under the ESA with the U.S. Fish and Wildlife Service (USFWS); and/or applicable memoranda of agreements/memoranda of understandings (MOUs) with cooperating agencies or groups (U.S. Army Environmental Command 2013a).

The ESA (16 USC 35 § 1531 et seq.) is administered by the USFWS and requires federal agencies to conserve terrestrial endangered species. Under the ESA, vegetation and wildlife species may be listed as either threatened or endangered with the purpose of protecting or recovering those species and the habitat on which they depend. Under Section 7 of the ESA, federal agencies, in consultation with USFWS, must ensure their actions are not likely to jeopardize the continued existence of any listed species or to result in any adverse modification or destruction of critical habitat. Documentation of consultation in accordance with Section 7 is included as Appendix B.

Under the MBTA (16 USC 7 § 703-712 et seq.) and pursuant to Executive Order 13186 (66 FR 3853), the DoD has direction to evaluate actions and agency plans on migratory birds, initiate actions to minimize the take of birds, and contribute to the conservation of migratory birds. Unless permitted by regulation (i.e., waterfowl hunting or incidental take during DoD training and testing) the MBTA prohibits the take, capture, or killing of any migratory birds, and any parts, nest, or eggs of any such bird. Actions that may adversely impact or indirectly “take” birds such as habitat destruction or manipulation are not a violation of the MBTA unless migratory birds are killed or wounded during the activity (US Army Environmental Command 2008).

The Sikes Act (16 USC § 670a-670o) authorizes the Secretary of Defense to develop cooperative plans for conservation and rehabilitation programs on military reservations and to establish outdoor recreation facilities. The Sikes Act also provides for the Secretaries of Agriculture and Interior to develop cooperative plans for conservation and rehabilitation programs on public lands under their jurisdiction.

Invasive species consist of non-indigenous species (e.g. plants, wildlife, and invertebrates) that adversely affect the habitats they invade economically, environmentally, or ecologically. Executive Order 13112, “Invasive Species,” (64 FR 6183) requires all federal agencies to prevent the introduction of invasive species, provide control, and minimize the economic, ecologic, and human health impacts that invasive species may cause. The effects of invasive

species are addressed in Army Policy Guidance for Management and Control of Invasive Species distributed in June 2001<sup>9</sup>.

#### 3.4.1.2 **Affected Environment**

The region of impact (ROI) for biological resources consists of areas that support terrestrial biological resources that may be directly or indirectly affected by the proposed action. Vegetation, wildlife, protected species, and their associated habitats that have the potential to be impacted by the proposed action are considered to be part of the ROI. The following biological resources are found within the proposed action's ROI.

#### **Terrestrial Vegetation**

The proposed action would be located in the northeast corner of the PTA cantonment. The plant community in the project area exists in two distinct areas: 1) the PTA Interpretive Garden (which is used for educational purposes and is outplanted with native plant species) and 2) the remainder of the area, with vegetation classified as "Urban Land Cover"<sup>10</sup>. No naturally occurring federally listed or candidate plant species are known to exist in the project area.<sup>11</sup>

Native soils in the project area have been heavily impacted over decades of use by military training, operations, and construction/maintenance of the cantonment facilities and roads. The Urban Land Cover community is made up of herbaceous vegetation and scattered remnant native trees with remnant native shrubs and grasses on the adjacent cinder cone (Puu Pohakuloa). Herbaceous plants of the Disturbed community include a mix of native and invasive species with invasive species comprising the majority of the plant community. Plant species of the Disturbed community include *Atriplex semibaccata*, *Avena fatua*, *Brassica campestris*, *Brassica nigra*, *Bromus rigidus*, *Cenchrus clandestinus*, *Cenchrus setaceus*, *Dactylis glomerata*, *Erodium cicutarium*, *Eucalyptus* spp., *Gnaphalium* spp., *Heterotheca grandiflora*, *Hordeum vulgare*, *Lepidium virginicum*, *Malva parviflora*, *Melilotus indica*, *Medicago lupulina*, *Myoporum sandwicense*, *Nerium oleander*, *Pelargonium* spp., *Pinus* spp., *Plantago lanceolata*, *Senecio madagascariensis*, *Sophora chrysophylla* and *Verbesina encelioides*. While listed plant species exist and are managed at PTA, no individuals are extant within the Urban Land Cover community of the cantonment.

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<sup>9</sup> U.S. Army, 2001, *Army Policy Guidance for Management and Control of Invasive Species*, <http://aec.army.mil/usaec/endangered/invasive-species.pdf>, published June 26, 2001.

<sup>10</sup> U.S. National Vegetation Classification Geodatabase, 2013

<sup>11</sup> USFWS Request for Informal Consultation Concurrence and Conference, June 2016.

## 1 Terrestrial Wildlife

2 The lack of available resources (i.e., food, water, and cover) in the project area limits the  
3 amount of wildlife occurring within this environment. Therefore, wildlife inhabiting the ROI  
4 consists mainly of a few vertebrates that include several species of birds, rodents, and  
5 ungulates such as feral sheep (*Ovis aries*), goats (*Capra hircus*), and Mouflon-domestic sheep  
6 hybrids (*Ovis musimon x Ovis aries*).<sup>12</sup>

7 Invertebrates: Approximately 96 species of arthropods and invertebrates occur on PTA, the  
8 majority of which are nonnative species.<sup>13</sup> The low numbers of native arthropods and  
9 invertebrates is likely due to the history of anthropogenic disturbance, lack of intact native  
10 plant communities, and the sparse distribution of non-native plant species throughout the  
11 cantonment.

12 Amphibians, Reptiles, and Fish: There are no surface water bodies on PTA that can support  
13 fish species; therefore, no fish species occur within the ROI. No reptiles or amphibians are  
14 native to the Hawaiian Islands; therefore, potential reptile or amphibian species that may be  
15 encountered within the ROI would be considered invasive species.

16 Mammals: The Hawaiian hoary bat (*Lasiurus cinereus semotus*) is the only native land  
17 mammal at PTA and is known to forage<sup>14</sup> at night in the cantonment area.

18 Other mammals that occur on PTA consist of introduced game animals, including the feral pig  
19 (*Sus scrofa*), feral sheep (*Ovis aries*), goats (*Capra hircus*), and mouflon sheep (*Ovis mismon*),  
20 and other introduced species, including rat species (*Rattus rattus*), mongoose (*Herpestes*  
21 *auropunctatus*), mice (*Mus domesticus*), feral dogs (*Canis familiaris*), and feral cats (*Felis*  
22 *catus*). On PTA, these species are considered a nuisance, and mitigation efforts, such as fences,  
23 trapping, and eradication, are in place to control their populations (U.S. Army Environmental  
24 Command 2013a).

25 Birds: Birds are present in the cantonment area where they use the vegetation and structures  
26 for foraging and nesting. The bird species protected by the Endangered Species Act and/or the  
27 Migratory Bird Treaty Act detected at the PTA cantonment<sup>15</sup> are provided in Table 3-1.

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<sup>12</sup> University of Hawai'i, 2009, *Mauna Kea Comprehensive Management Plan, UH Management Areas*,

<sup>13</sup> U.S. Army, 2013a, *Final Environmental Impact Statement for the Construction and Operation of an Infantry Platoon Battle Course at Pōhakuloa Training Area, Hawaii*, U.S. Army Pacific and U.S. Army Environmental Command, March 2013.

<sup>14</sup> Gon SM, Honigman L., Zevin D., Fulks W, David. 1993 Vertebrate inventory surveys at the multipurpose range complex, Pohakuloa Training Area, Island of Hawaii

<sup>15</sup> Personal communication with Lena Schnell, Pohakuloa Natural Resource Office, May 9, 2016

1 **Table 3-1: Protected Bird Species of the PTA Cantonment**

| Common Name                         | Species                     |
|-------------------------------------|-----------------------------|
| Barn Owl <sup>c</sup>               | <i>Tyto alba</i>            |
| Hawaiian Amakihi <sup>ab</sup>      | <i>Hemignathus virens</i>   |
| Hawaiian Goose <sup>abd</sup>       | <i>Branta sandvicensis</i>  |
| House Finch <sup>ac</sup>           | <i>Haemorhous mexicanus</i> |
| Northern Mockingbird <sup>ac</sup>  | <i>Mimus polyglottos</i>    |
| Pacific Golden Plover <sup>ab</sup> | <i>Pluvialis fulva</i>      |
| Sky Lark <sup>ac</sup>              | <i>Alauda arvensis</i>      |

2 *a Migratory Bird Treaty Act listed species*

3 *b Native species*

4 *c Non-native, non-game species*

5 *d Endangered*

## 6 3.4.2 Environmental Consequences

7 The no-action alternative would have no impact on biological resources.

8 Environmental consequences of the preferred alternative are discussed below:

### 9 3.4.2.1 **Terrestrial Vegetation**

10 There are no naturally occurring listed plant species within the 80-acre project area.  
 11 However, there are several listed species out-planted in the interpretive garden managed by  
 12 NRO staff. While the building adjacent to the garden (Building T-93) is scheduled for  
 13 demolition in FY 2023, the proposed action will result in no changes to the physical structure  
 14 of the interpretive garden. Measures will be taken to avoid or minimize impacts to any  
 15 federally-listed and candidate plant species that may be present in the garden during  
 16 construction activities. The Army will include dust, erosion, and sediment control measures,  
 17 as well as preparation and implementation of a dirt and dust control plan to minimize the  
 18 effect of construction activities on the garden. The physical structure of the garden will  
 19 remain unchanged.

20 Best management practices are also proposed to prevent the introduction of harmful invasive  
 21 pests including reptiles, amphibians, invertebrates, weeds, and rapid ohia death (ROD) into  
 22 PTA. The BMPs include keeping vehicles, machinery, equipment and construction areas clean  
 23 and free of debris; inspection of vehicles and equipment for invasive ants; sanitizing all  
 24 cutting tools to prevent ROD; and briefing all project personnel prior to project  
 25 implementation.

### 26 3.4.2.2 **Terrestrial Wildlife**

27 The non-native species of birds, mammals, and reptiles that are present are tolerant of the  
 28 current cantonment activities and noise, which includes the presence of personnel, vehicle  
 29 traffic, and occasional nighttime lighting. No permanent loss of habitat would occur under the  
 30 preferred alternative. Habitat removal would be negligible and would not negatively impact  
 31 habitat used by any threatened or endangered species. Construction activity would result in



short-term impacts from disturbance to terrestrial wildlife including State of Hawaii-listed threatened and endangered species.

### Section 7, Endangered Species Act Consultation

A record of Section 7, Endangered Species Act consultation correspondence is provided in Appendix B. The Army initiated informal Section 7 consultation with the USFWS by letter dated 27 June 2016. The letter requested concurrence that the preferred alternative, i.e., the PTA Facilities Improvement Program (FIP), was “not likely to adversely affect” the endangered Hawaiian Goose (*Branta sandvicensis*), endangered Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), endangered Hawaiian Petrel (*Pterodroma sandwichensis*), candidate Band-rumped Storm Petrel (*Oceanodroma castro*), candidate Hawaiian Yellow-faced Bee (*Hylaeus anthracinus*), or any federally listed and candidate plant species. The endangered Hawaiian Hawk (*Buteo solitarius*) was not part of the informal consultation; the Army received a no-effect determination for this species for all military activities at PTA in the 2013 Biological Opinion issued by the USFWS. Therefore, any potential effects to the Hawaiian Hawk from cantonment construction are covered under that previous consultation.<sup>16</sup>

The USFWS responded to the request for concurrence in a letter dated September 28, 2016. The letter identified avoidance and minimization measures to limit the impact of the project on listed species. The USFWS stated that with these avoidance and minimization measures, the proposed FIP is not likely to adversely affect the Hawaiian goose, Hawaiian hoary bat, Hawaiian petrel, band-rumped storm petrel. It also identified minimization measures for the listed plant species in the interpretive garden, which are summarized in Section 3.4.2.1 above.

The potential effects and avoidance and minimization measures for listed species is summarized below.

Hawaiian goose: The endangered Hawaiian goose occasionally lands in the vicinity of the project area during the summer flocking season (April-September), resting and loafing while in the area. Potential effects are from elevated noise levels associated with construction, and from vehicle strikes resulting from increased traffic. Because only small areas will be affected by construction activity at any one time and for limited duration, and because geese are infrequent visitors to the project area, and because the project area lacks features attractive to geese (e.g., lawns and standing water), and because of enforcement of a low speed limit, the impact to Hawaiian geese is expected to be discountable. Minimization measures for Hawaiian geese include:

- Construction personnel remain aware of the potential for geese presence and be vigilant in looking for them during construction period.
- All Hawaiian goose sightings during project period to be reported to PTA NRO.
- If geese are present during construction, a NRO biologist will educate crews on how to work safely around them.
- All speed limits to be followed and enforced.

Hawaiian hoary bat: Bats roost in trees during the day, but the relative lack of roosting habitat in the cantonment makes their presence during the day unlikely. Foraging bats may be drawn to artificial light, in particular bright, unshielded, cool lights (more blue than yellow) through

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<sup>16</sup> USFWS Request for Informal Consultation Concurrence and Conference, June 2016.

the attraction of insects. This puts them at risk of colliding with construction equipment. Bats may also be affected by artificial noise at night which could interfere with their echolocation. Minimization measures include:

- Avoid trimming and removal of trees over 15 feet tall during bat pupping season (June 1 through September 15).
- All construction activities to take place during daytime.
- All observations of downed bats shall be reported to PTA NRO.
- Incorporate Unified Facilities Criteria (UFC) for Interior and Exterior Lighting System standards when replacing outside lights including using monochromatic amber LEDs and shielding.
- No barbed wire installation associated with this project.

Seabirds: Hawaiian petrel and band-rumped storm petrel density in the saddle region flyway is estimated to be very low (Cooper et al. 1996) and very few petrels are expected to transit near the cantonment at night. Hawaiian petrels and band-rumped storm petrels nest in underground burrows, cracks and crevices around Hawaii Island. There are no recorded burrows in the cantonment.

In order to protect these seabird species, no nighttime construction activities would be permitted as anthropogenic light sources are known to be hazardous to fledging petrels by disrupting navigation (Simon and Hodges 1988). While permanent lighting will be installed on replacement buildings, the overall lighting levels in the project area are not expected to change. Under the existing lighting design and levels, seabird fallout has not been documented in the project area. Light management is essential for many aspects of military training and lighting standards exist for the DoD. The UFC for Interior and Exterior Lighting Systems and Control (DoD 2016) standards include establishing interior zone levels compatible with the area's land use (e.g. low ambient lighting for personnel support districts) and installing shielding for exterior lights. In addition, the Army will meet the requirements to maintain dark skies as described in the County of Hawaii lighting ordinance (Hawaii County, 1983). In addition, any observations of downed petrels shall be reported to the PTA Natural Resources Office. Minimization measures include:

- All construction activities to take place during daylight hours, avoiding use of lights.
- Report downed seabirds to the NRO as part of the required briefings provided to all military personnel training at PTA.
- Incorporate UFC for Interior and Exterior Lighting Systems standards when replacing outside lights, including using monochromatic amber LEDs and shielding.

Determination of "No Effect" for Blackburn's sphinx moth (*Manduca blackburni*): The USFWS acknowledged the Army's "no effect" determination for Blackburn's sphinx moth, based on the fact that this species has not been recorded at the cantonment; is generally not observed at above 5,000 feet altitude (cantonment is at 6,300 feet); and Army's ongoing efforts with Hawaii Department of Transportation and Big Island Invasive Species Committee to prevent spread of BSM host plant, tree tobacco (*Nicotiana glauca*). If tree tobacco does become established at cantonment, USFWS recommends that activities that could disturb tree or soil be ceased, and that USFWS be contacted for additional guidance.

Determination of “No Effect” for Yellow-faced bees (*Hylacus anthracinus*): The Army initially requested concurrence with a “may affect, not likely to adversely affect” determination for this species which is proposed for listing. After further examination, the effect determination was changed to “no effect.” USFWS acknowledges this determination based on the fact that there was a single record of *H. anthracinus* on PTA property in 2004. USFWS encourages the Army to continue surveying its property for this species, and to contact USFWS if the bee or its host plants become established in the cantonment.

### **Compliance with Migratory Bird Treaty Act**

House Finches: In order to fulfil the Army’s obligations for this MBTA protected bird, the PTA Natural Resources Office will conduct pre-construction surveys of all buildings for nesting House Finches. Any empty nests under construction will be removed and destroyed to dissuade nesting (2016 email to Pamela Sullivan from Jenny Hoskins, USFWS). If nesting birds, eggs, or chicks are found the Army will apply for a MBTA depredation permit (guidance from PTA NRO dated 07 June 2016).

During the operational period, the preferred alternative would have no new impacts to sensitive wildlife and their habitats because the activities in the cantonment would return to the baseline state.

## **3.5 Noise**

### **3.5.1 Affected Environment**

The level of ambient noise is an important indicator of environmental quality. Noise from vehicle traffic, aircraft operations, industrial land uses, and construction activities can impact ambient noise levels based on their proximity to noise-sensitive receptors (e.g., occupied structures). Chronically high noise levels can impact personal health and quality of life in an area.

Noise is defined as unwanted or annoying sound that interferes with or disrupts normal activities. The response of different receptors to similar noise events is diverse and is influenced by the type of noise, perceived importance of the noise, its appropriateness in the setting, time of day, type of activity during which the noise occurs, and sensitivity of the receptor. A noise-sensitive receptor is defined as a land use where people involved in indoor or outdoor activities may be subject to stress or considerable interference from noise. Such locations or facilities often include residential dwellings, hospitals, nursing homes, educational facilities, and libraries. Sensitive receptors may also include noise-sensitive cultural practices, some domestic animals, or certain wildlife species. There are no sensitive noise receptors in the vicinity of the cantonment; the nearest residential community (Waikii Ranch) is 13 miles to the northwest.

The cantonment noise environment can best be described as an industrial setting characterized by aircraft operations at the nearby airfield, movement and maintenance of military and industrial vehicles and equipment typical of an Army training range cantonment, and the distant sound of military live fire training on the active ranges. These noise sources are expected to generate daytime sound levels in the range of 60 to 90 dBA, considered moderately loud to very loud (by comparison, 30 dBA is considered very quiet).

### 3.5.2 Environmental Consequences

There would be no long-term impact on noise levels from the no-action alternative because there is no foreseeable change to training range usage or number of permanent party assigned to PTA.

For the preferred alternative, noise from construction vehicles, machinery, equipment, and power tools would be the dominant source of construction noise. Typical noise levels associated with this type of equipment can be in the range of 90 dBA at 50 feet from the source (U.S. DOT 2006, Table 12-1). In general, noise drops off with distance from the noise source (approximately 6 dB for point sources at each doubling of the distance) so distant locations, like the Waikii Ranch residential community, would not be affected. Measures to minimize noise include the use of sound-dampening devices (e.g., baffles and mufflers) and properly maintaining all equipment, vehicles, and machinery. No night time construction will be conducted. The construction contractor(s) would be responsible for compliance with all applicable regulatory requirements for noise control, including Hawaii Administrative Rules Chapter 46 regarding Community Noise Control.

Construction-period noise associated with the preferred alternative would temporarily affect permanent party personnel assigned to the cantonment during working hours and Soldiers in the transient barracks. DoD personnel are trained to use appropriate noise attenuation devices, like ear protection, if they are close to construction activities, and offices would be temporarily relocated to other areas of the cantonment if there are any prolonged noise generating activities. Because of this, construction-period noise would have a less than significant impact. During the operational period, the noise environment would revert to the status quo (no impact).

MBTA Protected Species – Construction of the project could affect MBTA-protected species by disturbing habitat provided by trees and/or vegetation in the area. However, these effects are expected to be insignificant because only small areas will be affected at one time and for limited duration. Studies demonstrate that various bird species co-exist with or habituate to loud noises (USAG-HI 2010c; Peshut and Schnell 2011). If present during construction activities, birds are expected to temporarily vacate the area if noise levels exceed comfort levels.

## 3.6 **Natural Hazards, Geology and Soils**

### 3.6.1 Affected Environment

According to the National Seismic Hazard Map prepared by the U.S. Geological Survey (USGS), PTA and the majority of the island of Hawaii is located within the highest seismic hazard area rated by the USGS. With regard to lava inundation, the cantonment is located in Lava Hazard Zone 8 (low risk hazard) and adjacent to Hazard Zone 2 (recent lava flow activity) as determined by the USGS. Zones 5 to 9 are areas that have not been covered by lava since 1800 and are protected by topography or covered by very little lava in the last 750 years (Mullineaux et al. 1987).

The project area is at an elevation of approximately 6,300 feet above mean seal level (amsl), in the saddle between two volcanoes. The project area is built around the lower slopes Puu Pohakuloa (elevation 6,440 feet amsl). The terrain in the vicinity of the project area slopes

gently toward the west with average slopes ranging from approximately 2 to 5 percent, and is adjacent to steep slopes (>30%) at the base of Mauna Kea.

The soils within the project area are classified as Keekee Loamy Sand, 0 to 6 percent slope with some pockets of Very Stony Lands. The Keekee series consists of deep and very deep, somewhat excessively drained soils that formed in material weathered from volcanic ash and alluvium (NRCS 1973). Keekee type soils are found under Blocks A and B of the project area. Soils within the project area were disturbed during the original development of the site and over the past 60 years of continuous occupancy.

Average annual rainfall at BAAF is light (16.95 inches per year), with the wettest months being November through January and March (Giambelluca 2013). Because of its location at the base of the Mauna Kea's massive drainage area, the cantonment periodically receives significant flooding events that sometimes overwhelm engineered drainage systems and result in temporary flooding. These flooding events can result in soil erosion and damage to on-site facilities.

### 3.6.2 Environmental Consequences

Under the no-action alternative, FIP drainage improvements will have been completed. These improvements are expected to reduce ongoing soil erosion that occurs when on site drainage systems are overwhelmed during heavy rain events. This would have a beneficial impact by improving drainage systems, reducing vulnerability to storm events and reducing flood-induced soil erosion. During the construction of drainage and utility improvements, best management practices will be implemented to keep impacts to soils less than significant.

Under the no action alternative, existing structures in the cantonment would remain vulnerable to earthquake hazards because they are non-compliant with current building codes with regard to structural and seismic resistance.

Under the preferred alternative, construction would have less than significant impact. New construction would be in accordance with current seismic codes, which would reduce the vulnerability to damage from earthquakes. Potential exposure to lava inundation, considered to be low, would remain unchanged.

## 3.7 **Air Quality**

Air quality in a given location is defined by the concentration of various pollutants in the atmosphere. A region's air quality is influenced by many factors including the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions.

### 3.7.1 Affected Environment

The federal Clean Air Act (42 USC 85 § 7401 et seq.) requires each state to identify areas that have ambient air quality in violation of the National Ambient Air Quality Standards (NAAQS). The status of areas with respect to the NAAQS is categorized as nonattainment (any area that does not meet an ambient air quality standard, or that is contributing to ambient air quality in a nearby area that does not meet the standard), attainment (meets the national standards), or unclassifiable (cannot be classified based on available information). The unclassified designation includes attainment areas that comply with federal standards, as well as areas that lack monitoring data. Unclassified areas are treated as attainment areas for most

regulatory purposes. Areas that have been reclassified from nonattainment to attainment are considered maintenance areas. States are required to develop, adopt, and implement a state implementation plan to achieve, maintain, and enforce the NAAQSs in nonattainment areas. The plans are submitted to, and must be approved by, the EPA. The entire state of Hawaii is categorized as attainment or unclassified for each of the NAAQSs. Criteria pollutant levels remain below state and federal ambient air quality standards at all state and local monitoring stations in the state (State of Hawaii 2012a).

PTA is situated between three volcanoes on the island of Hawaii: Mauna Kea, Mauna Loa, and the much smaller peak of Hualalai. The Kilauea caldera, on the east flank of Mauna Loa, is the single largest emission source in the state, usually producing more than 2,000 tons of sulfur dioxide per day. Active volcanoes like Kilauea emit sulfur dioxide, as well as other gases, including hydrogen sulfide, hydrogen chloride, hydrogen fluoride, and trace metals like mercury.

Air quality at PTA is not affected by pollutant sources from urban areas due to its rural location. Emissions from transportation and explosives detonations can be locally important during troop transportation and maneuver and firing exercises. Sources of fugitive dust associated with military vehicle traffic include vehicle convoys on military vehicle trails, vehicle maneuver training on gravel or dirt roads inside the cantonment, and down range, off-road military vehicle maneuver training.

Overall, air pollution levels at PTA and on the island generally are low due to the small size and isolated location of the state and the predominant trade wind regime. The state's small size limits opportunities for locally generated air pollutants to accumulate or recirculate before being transported offshore and away from land areas.

Climate Change: The President's Council on Environmental Quality (CEQ) recently issued final guidance for federal departments for considering Greenhouse Gas (GHG) emissions and the effects of climate change in NEPA reviews (August 2016). It provides a common approach for assessing proposed actions.

According to the CEQ guidance document, climate change science continues to expand and refine our understanding of the impacts of anthropogenic (manmade) GHG emissions. CEQ's first Annual Report in 1970 referenced climate change, indicating that "[m]an may be changing his weather." At that time, the mean level of atmospheric carbon dioxide (CO<sub>2</sub>) had been measured as increasing to 325 parts per million (ppm) from an average of 280 ppm pre-Industrial levels.<sup>17</sup> Since 1970, the concentration of atmospheric carbon dioxide has increased to approximately 400 ppm (2015 globally averaged value). Since the publication of CEQ's first Annual Report, it has been determined that human activities have caused the carbon dioxide content of the atmosphere of the planet to increase to its highest level in at least 800,000 years.

The earth's climate is affected by energy entering and leaving its atmosphere, which can be affected by both natural and human factors, including variations in the sun's energy reaching the planet, changes in the reflectivity of its atmosphere and surface, and changes in the amount of heat retained by its atmosphere. When energy from the sun reaches the earth's surface, it can either be reflected back into space or reabsorbed by the earth. After it is

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<sup>17</sup> National CO<sub>2</sub> levels are measured at NOAA's Mauna Loa Observatory at the 11,141-ft elevation on Mauna Loa's north slope – about 15 miles south of the cantonment.



absorbed, the energy can be released back into the atmosphere as heat (i.e., infrared radiation) (U.S. EPA, June 28, 2012). GHG emissions absorb energy, resulting in the slowing or prevention of heat loss back into space. The key GHGs emitted by human activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated gases. In 2014, energy supply (i.e., the burning of coal, natural gas, and oil for electricity and heat) was the largest source of global GHG emissions (30%), followed by transportation (26%), industry (21%), commercial and residential buildings (12%), and agriculture (9%), (U.S. EPA, 2016).

In 2015, Hawaii became the first state to set a goal of obtaining 100% of its electricity from sustainable renewable sources by 2045, which will significantly reduce overall GHG emissions statewide. The U.S. Energy Security Administration ranked the State of Hawaii 43<sup>rd</sup> in total CO<sub>2</sub>e emissions in 2015, at 19.0 million metric tons (MT) (<https://www.eia.gov/state/rankings/?sid=HI#series/226>, accessed October 17, 2016). No equivalent calculations are provided for Hawaii County but based on its share of the state's population, it would account for approximately 2.5 million MT/yr of CO<sub>2</sub>e.<sup>18</sup> In comparison to anthropogenic sources, the USGS Hawaii Volcano Observatory estimated that the Kilauea eruption discharges between 2.9 and 10.9 million MT/yr of CO<sub>2</sub>e (Volcano Watch, February 15, 2007 – adjusted from daily to annual).

A 2011 assessment of PTAs energy usage by the National Renewable Energy Laboratory (NREL 2011) determined that PTA's baseline was 1,245 MT/yr CO<sub>2</sub>e<sup>19</sup> and 8,156 MT/yr CO<sub>2</sub>e,<sup>20</sup> when fuel use on post and commuter fuel use were included.

### 3.7.2 Environmental Consequences

The no-action alternative, a continuance of the status quo, would have no impact on air quality.

The preferred alternative will have no impact during operation, and impacts that are less than significant during construction. Because the State of Hawaii is in attainment of the NAAQS, the preferred alternative is not subject to the Clean Air Act's General Conformity Rule. The preferred alternative would not introduce any new major air emissions sources or stationary air emissions sources and would have no impact during the operational phase. Short-term, temporary air emissions (e.g., fugitive dust, combustion of fossil fuels) would be generated during the construction period. These potential impacts would be less than significant because they are of short duration at any one location, and the work would gradually progress through the eight-year phasing program. The construction contractor would be required to employ BMPs to minimize particulate emissions during ground disturbing activities. All construction activities would comply with the provisions of HAR 11-60.1-33 (Fugitive Dust). There would be no impact on air quality during the operational period because the basic uses of the cantonment would not change.

**Climate Change:** A rough estimate of GHG generated during the construction period was derived assuming 250,000 square feet of new construction of mixed building materials (e.g., steel, concrete and wood) on a previously developed site using the Build Carbon Neutral

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<sup>18</sup> CO<sub>2</sub>e – Carbon dioxide equivalent; is a term describing different GHG components as a common unit which would have the equivalent global warming impact.

<sup>19</sup> Equal to energy use from 131 homes for one year (USEPA GHG Equivalencies Calculator <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>).

<sup>20</sup> Equal to energy use from 861 homes for one year (ibid)

calculator (URL=<http://buildcarbonneutral.org/calculated.php>) which came out to 6,600 MT CO<sub>2</sub>e over the eight year construction period (an average of 825 MT/yr CO<sub>2</sub>e).<sup>21</sup> Hawaii County had 83,904 housing units in 2014 (American Community Survey Table DP04) so construction period GHG measured relative to total housing stock would be about a tenth of one percent of County-wide emissions (87.1 units/83,904 units).

During the operational period, it is assumed the cantonment will return to its pre-construction baseline of GHG emissions, assuming a similar level of austere services are provided. Based on the foregoing analysis, the preferred alternative would have a less than significant impact on climate change.

## **3.8 Water Resources**

### **3.8.1 Affected Environment**

Water resources include streams, lakes, rivers, wetlands, groundwater, floodplains, coastal resources, and wild and scenic rivers. Water resources such as lakes, rivers, streams, and canals make up the surface hydrology of a watershed. Watersheds are defined by the U.S. Environmental Protection Agency (EPA) as an area of land where all of the water that is under it or drains off of it goes into the same place (EPA 2012b). Watersheds of the island of Hawaii are small and characterized by fast-flowing streams with permeable volcanic rock and soils (U.S. Army Environmental Command 2013a).

PTA is located in the saddle between the Northwest Mauna Loa and the West Mauna Kea watersheds. There are no surface streams, lakes, wetlands or other water bodies within PTA or on adjacent land. Mean annual rainfall recorded at the Mauna Kea Recreation Area rain gauge just east of the cantonment is low at approximately 16.95 inches (Giambelluca 2013). During intense rainfall events, runoff sheet flows to the large, typically dry drainage channel that bisects the project area and terminates to the west of the site in the vicinity of BAAF.

The University of Hawaii (UH), in partnership with the Army, initiated the Humuula Saddle Hydrologic Study Project in 2012 to develop an improved understanding of the Hawaii County groundwater system to improve management practices of the island's groundwater resource and enable regional stakeholders to make more efficient use of the resources at their disposal (UH March 2014). In 2015, UH researchers developed a successful test well within the PTA cantonment and encountered an aquifer that began at an elevation of about 4,600 feet above sea level (ibid). UH researchers are drilling additional test wells to establish the extent of the groundwater resource. A developable groundwater resource in the Saddle Area would benefit the Army, which currently spends approximately \$0.9 million/year to truck water to PTA from a Hawaii County Department of Water Supply source in Waimea, as well as expanding the range of options available for the DHHL's Humuula/Piihonua lands to the east of PTA (Hawaii News Now.Com 2015).

According to the Federal Emergency Management Agency's Flood Insurance Rate Map (Panel 1551660575C; FIRM index date: April 2, 2004), the cantonment and surrounding areas are located in Zone X, areas determined to be outside the 0.2% annual chance floodplain. Therefore, the proposed action would not trigger compliance with Executive Order 11988, Floodplain Management.

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<sup>21</sup> Equal to energy use from 87.1 homes for one year (ibid)

According to the U.S. Fish and Wildlife Service National Wetland Inventory, there are no wetlands in the vicinity of the cantonment and therefore, the proposed action would be compliant Executive Order 11990, Protection of Wetlands.

### **3.8.2 Environmental Consequences**

The FIP drainage, water, and wastewater system improvements that will proceed under the no-action alternative will have a minor beneficial impact on water resources. Drainage improvements will reduce stormwater runoff and erosion. Replacement of the water distribution system and fixtures will increase system efficiency and reduce overall per capita water consumption. The FIP utility improvements do not include new wells, so there is no impact on groundwater resources.

Under the preferred alternative, consultation with the Department of Health Clean Water Branch will be conducted to determine the need for NPDES permit for construction-related stormwater discharge for land disturbance equal or greater than one acre, pursuant to the Clean Water Act of 1972 (33 USC. 121 et seq.). The NPDES permit requires that a project-specific Stormwater Pollution Prevention Plan (SWPPP) be prepared to identify potential sources of stormwater pollution at the construction site, describe stormwater control measures to reduce or eliminate pollutants in discharges from the construction site, and identify procedures to comply with the terms and conditions of the general permit. The BMPs required under these permits would avoid adverse construction period impacts. There will be no impact to water resources.

## **3.9 Public Facilities and Infrastructure**

State, county, and publically regulated utility-owned facilities and services include public roadways; regional wastewater and potable water systems; public schools and parks; fire, police and emergency medical services; and public electrical and telecommunications systems. Army-owned facilities and services include a wide range of municipal type services needed to support PTA. These services include the full range of facilities and infrastructure, construction and maintenance services; fire, police, and emergency medical services; and troop housing and support amenities, among others.

### **3.9.1 Affected Environment**

Because of its remote location, the Army owns and provides most of the needed facilities and services to support PTA operations. Cantonment activities do not impact public facilities and services (schools, hospitals, parks, etc.), except indirectly through the families of 120 permanent party personnel that live off-site in various Hawaii County communities. Occasional convoy traffic associated with periodic training exercises is closely coordinated with state and county governments and the general public to minimize congestion-related impacts to public roadways. Water to support PTA operations is purchased from the Hawaii County Department of Water Supply and trucked via commercial hauler to the Army-owned water storage tanks at the cantonment. Municipal solid waste is collected at PTA and hauled to the West Hawaii Sanitary Landfill by commercial haulers. Septic tank pumping services and portable latrine waste disposal during training events are hauled to county wastewater disposal facilities by commercial haulers. Electrical power and telecommunications services are provided to PTA by Hawaii Electric Light Company, Hawaiian Telcom, and Spectrum (formerly Oceanic Cable) from facilities running along DK1 Highway. Access to PTA is via state

and county owned roadways. (DKI Highway was partially funded by the Army to improve its access to PTA and port facilities on the east and west sides of the island).

### 3.9.2 Environmental Consequences

Under the no-action alternative, FIP drainage, wastewater, water, electrical and telecommunications improvements that have already been approved through REC will be implemented. These utilities will be modernized to meet current construction code requirements. Overhead utilities (e.g., electrical and telecommunication lines) will be placed in underground conduits. Water lines will be replaced with lines sized to provide adequate pressure and flowrates. The current wastewater collection and disposal system is being replaced with a Hawaii Department of Health-approved wastewater collection and treatment wastewater system (as described in Record of Environmental Consideration for Repair of Sewer Collection System, PTA. USAG-HI, April 12, 2016). Existing drainage swales and culverts will be repaired and new drainage facilities constructed to manage onsite flooding potential (as described in Record of Environmental Consideration for Repair Cantonment Drainage (South), PTA. USAG-HI, April 12, 2016).

During the installation of the FIP utility improvements, temporary impacts to onsite Army-owned facilities and services may occur but will be temporary and are being managed to maintain operational capabilities. The new utility and infrastructure systems will improve operational readiness and system reliability and reduce the increasing levels of maintenance required to keep the aging systems functional. Therefore, the drainage and utility improvements proceeding under the no action alternative will have a beneficial impact on public facilities and infrastructure.

The preferred alternative and currently proposed action is limited to the implementation of FIP building improvements. The proposed action does not involve any other additional utility improvements beyond what has already been approved by REC and is underway. There will be no long-term change to the operational tempo of PTA, so use of cantonment would not change and there would be no long-term impact to island-wide or Army facilities or services. The building components of the FIP will have a positive impact on PTA operations, morale and quality of life, and therefore is a beneficial impact.

## 3.10 Socioeconomics

### 3.10.1 Affected Environment

Hawaii County had an estimate residential population of 202,670 in 2015, and total employment was estimated at 102,880 jobs in 2015 (Hawaii Data Book 2016). Median household income was estimated at \$54,914 in 2015 (versus statewide median household income of \$73,097 in 2015). Hawaii County has a diversified economy with stable government and tourist/second home sectors and a strong and growing diversified agricultural sector. West Hawaii (Kona and Kohala Districts) has experienced significant growth in the last few decades, while East Hawaii (Hilo and Hamakua Districts), the seat of County government, has lost population due in part to the closure of sugar plantations in the 1980s and 1990s. Hawaii County population is expected to increase to 296,320 by 2040 (46% increase over 2015 population) and employment is expected to grow to 151,690 by 2040 (47% increase over 2015 employment levels) (Hawaii Data Book 2016).

PTA is recognized as one of the U.S.'s premier live fire training ranges and is a cornerstone of the U.S. Army Pacific Commander's vision for the Pacific Training Complex (encompassing training centers in Hawaii, Alaska, Japan, and Korea), where PTA serves a regional training center within this complex. Therefore, from an economic perspective, the PTA range is a vital part of the U.S. Army in the Pacific.

In 2009, the Army in Hawaii had 21,421 active duty personnel, 5,389 National Guard and Reserve, 5,529 DoD civilian employees for a total staff of 32,330 personnel (RAND 2011). Congress has instructed the Army to reduce troop levels worldwide, and, in Hawaii, this action has meant the loss of approximately 1,200 Soldiers through the recent transition of the 25th Infantry Division's Stryker Brigade to an Infantry Brigade. Other DoD services like the U.S. Marine Corps, rely heavily on the PTA ranges for training proficiency.

Hawaii's average annual defense expenditures in 2007–2009 of \$6.527 billion (2009 dollars) were associated with \$12.220 billion worth of output, \$3.506 billion of earnings, and 101,533 jobs (RAND 2011). The \$12.220 billion in output represented 18.4 percent of Hawaii's GDP of \$64 billion in 2009. The 101,533 jobs represented 16.5 percent of Hawaii's average employment of 612,550 (State of Hawaii, "State of Hawaii Data Book," 2009, Table 12.06). The study noted that sensitivity estimates suggest that these amounts may be high (RAND, 2011).

PTA employs 119 permanent party personnel (136 authorized positions) and approximately 77 contractors to manage the installation. These staff are residents of Hawaii County and commute to PTA on a regular basis. Aside from the fire station bunkroom, there are no overnight accommodations for these staff.

### 3.10.2 Environmental Consequences

The FIP utility components, which are already proceeding under the no-action alternative, will have a short-term beneficial impact associated with construction period expenditures.

The preferred alternative, the implementation of the FIP building components, will likewise have short-term, beneficial impacts associated with construction-period expenditures and employment. The FIP (including utility and building components) is estimated to cost \$210M over eight years starting in FY 16 and ending in FY 23. Using a U.S. Bureau of Labor Statistics index (Ball 1981), the project would generate approximately 658 total direct jobs/year with approximately 261 construction-related, *onsite* jobs per year (the other *offsite* 397 jobs include *offsite* construction employment, manufacturing, trade, transportation and "other"). The socioeconomic impact of the *offsite* jobs would be beneficial but the geographic extent of the impact is hard to predict and would be based, among other factors, on the home base of the selected contractor(s), and the amount of locally resourced materials that can be included in the construction project. *Onsite* construction jobs equate to approximately 0.3 percent of total jobs in Hawaii County and these jobs would be considered a beneficial impact of the proposed action.

There would be no socioeconomic impact in the operational period as the current level of employment, wages and overall effect of the Hawaii economy would be expected to continue.

**Executive Order 12898** – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 32) directs each federal agency to identify and address any disproportionately adverse environmental effects of its activities on minority and low-income populations. There would be no disproportionately high and adverse impacts on low-income or minority groups from construction and operation of the preferred

alternative. All construction activities would occur within the boundaries of the cantonment. Poverty in the Census County Divisions surrounding PTA declined between 2000 and 2009, and remains at or below the state level (US Army Environmental Command 2013a).

**Executive Order 13045** – Protection of Children from Environmental Health Risks and Safety Risks (62 FR 78) requires federal agencies to assess activities that have disproportionate environmental health effects on children. The preferred alternative takes place within a secured, active military training installation where children are not allowed and non-military personnel are permitted by invitation only. There are no nearby schools or other facilities where children might be present.

### **3.11 Visual Resources**

#### **3.11.1 Affected Environment**

PTA is located in the broad and dramatic saddle between Mauna Kea and Mauna Loa. The dominant landscape features include the steeply sloping forms of Mauna Kea to the north and Mauna Loa to the south. The terrain within PTA is gently sloping, open, and periodically interrupted by volcanic cinder cones, or puu, creating dark visually receding areas throughout PTA (U.S. Army Environmental Command, 2013a). At a closer distance, vegetation within PTA consists of grasses and shrubs, and a few intermediate to tall tree forests offer other visual features (ibid). Uniform topography and vegetation result in a lack of visual complexity for PTA, but the expansiveness provides dramatic views (ibid). Despite its uniform landscape, the panoramic views and unity of natural features give this area a high visual quality (ibid). The sweeping views of the Saddle Region are discussed in the Hawaii County General Plan (2005) and the Draft Hamakua Community Development Plan (2016), as important to protect. Hawaii Electric Company (HELCO) maintains a 69kV transmission line along the DK1 Highway, which is a dominant, visible element to motorists traveling along the Highway, along with a variety of highway fences, signage, and drainage facilities.

The cantonment is a distinct visual element of this larger landscape, and includes a concentration of the World War II-era prefabricated Quonset huts (ibid). It is only visible to the general public from several vantage points along the DK1 Highway. The most visible features are the three large water storage tanks located above the highway and Puu Pohakuloa, around which the cantonment was built. Approaching from the east along the DK1 Highway, the rooftops of the cantonment buildings become visible from about one-half mile away as a narrow band above intervening terrain and scrub vegetation (Figure 3-2). Approaching from the west along the DK1 Highway, the rooftops of the maintenance buildings on the west side of the cantonment become visible from about a mile away (Figure 3-3). Within several hundred feet of the main gate, the HELCO cantonment substation and the top row of Quonset huts dominate the highway frontage on the south side of the road (Figure 3-4). Views of the cantonment buildings are most pronounced along the approximately 1,000-foot stretch of DK1 Highway between the main gate and Puu Pohakuloa captured in Figure 3-4.





**Figure 3-2: View of the project area from DKI Highway, approaching from the east**  
*Source: Google Street View (accessed May 26, 2016)*

Note the broad mass of the lower slopes of Mauna Kea on the right, the prominence of the Army's three main water tanks and the faint outline of Puu Pohakuloa in the center of the image. A low band of light colored roofs within the cantonment is visible at the base of the puu.



**Figure 3-3: View of the project area from DKI Highway, approaching from the west**  
*Source: Google Street View (accessed May 26, 2016)*

The lower slopes of Mauna Kea are to the left. Water tanks are just to the left of the highway alignment; Puu Pohakuloa is visible in the center of the image. Single story maintenance buildings on the west side of the cantonment appear to the right of Puu Pohakuloa.



**Figure 3-4: View of the project area from DKI Highway, looking south toward Mauna Loa**

*Source: Google Street View (accessed May 26, 2016)*

The highway passes along the north and upslope edge of the cantonment (Figure 3-4) so motorists are looking slightly downslope to view cantonment facilities; level views from the highway pass over the top of the single story buildings to Mauna Loa in the distance.

### 3.11.2 Environmental Consequences

The FIP utility improvements that are proceeding under a no-action alternative will place most of the overhead utility lines underground, resulting in a beneficial impact on view planes.

The preferred alternative would also contribute to the FIP's beneficial impact on the visual environment, by replacing the single story Quonset huts with modern, single story CMU buildings with low pitch metal roofs (see Figure 2-2 for a photographic comparison of existing and proposed building forms). The development intent is to reuse the slabs or finish floor elevations of the existing buildings so overall building heights should remain similar. The short views from the highway between the main gate and Puu Pohakuloa shown in Figure 3-4 would be less cluttered with a variety of newer buildings. The longer views across the cantonment to Mauna Loa would remain unchanged.

Both the removal of overhead utility lines and the construction of more visually attractive buildings would reduce the visual clutter of the existing cantonment with no impact on the important views toward Mauna Loa and Mauna Kea. Structures will be built in accordance with current design standards and will contribute to an improved and coordinated appearance of PTA facilities. This will be a beneficial visual impact.

During the construction period, construction equipment would be visible from the DKI Highway, but would not impact or diminish any important view planes. FIP phasing is proposed to start near the DKI Highway frontage and proceed downslope, so construction period visual effects would be most visible in the first few years of construction.

### 3.12 Toxic and Hazardous Substances

The generation, use, storage, transport, and disposal of hazardous materials and waste are regulated at the federal, state, and local levels. The terms hazardous waste, hazardous materials, and hazardous substances include those substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the Toxic Substances Control Act (TSCA). In general, they include substances that, because of their quantity, concentration, or physical, chemical, or toxic characteristics could present substantial danger to public health or welfare or the environment, when released.

The Department of Army pamphlet 200-1 governs the use, transport, and disposal of all hazardous materials and regulated waste by military or civilian personnel and on-post tenants and contractors at all Army facilities. In addition to these procedures, USAG-HI follows its own Installation Hazardous Waste Management Plan (IHWMP). This regulation provides plans and procedures for handling, storing, and disposal of hazardous materials (HM) and hazardous waste (HW) on USAG-HI installations (USAG-HI, 2010f).

#### 3.12.1 Affected Environment

The EPA requires a Hazardous Waste identification number for any installations that qualify as Large Quantity or Small Quantity Generators. Under normal operating conditions, PTA is considered a Conditionally Exempt Small Quantity Generator by the State of Hawaii; however, it is an episodic Large Quantity Generator and has, therefore, obtained an EPA identification as such.

PTA presently handles materials classified as hazardous (HAZMAT) as well as managing hazardous waste streams. In order to comply with RCRA, PTA is required to maintain a HAZMAT facility to control HAZMAT and hazardous waste. Operations are currently located in Building 350 near BAAF outside of the cantonment area. The majority of the hazardous waste is currently generated from three locations: the Directorate of Public Works (DPW) maintenance facility, tactical vehicle parking area, and BAAF. PTA staff members collect the hazardous waste, and contractors, along with the Defense Logistics Agency (DLA) Disposition Services, arrange for the waste to be loaded and transported to mainland disposal facilities. While training at PTA, the Marine Corps use a separate contractor to pick up their hazardous material.

Limited HAZMAT testing was conducted as part of the FIP design process for asbestos containing material (ACM), lead based paint (LBP), polychlorinated biphenyls (PCB), and chlordane in soils (EnviroQuest n.d.; FIP 65% design plans dated March 31, 2016, sheets GI002 and 3). ACMs were identified in some of the buildings in cement board, mortars, and joint compounds. LBP was commonly encountered. No PCBs or chlordane in soils were identified.

#### 3.12.2 Environmental Consequences

Both the no-action alternative and the preferred alternative would have a less than significant impact on toxic and hazardous substances during construction. During construction of both FIP utility components (proceeding under no action) and building components (preferred alternative), hazardous materials will be identified, removed, handled and disposed in accordance with all applicable regulations.

1 During the construction period, less than significant impacts from potential releases  
2 associated with construction-related hazardous materials and substances (e.g., petroleum, oil,  
3 ACM, LBP, and PCB) are likely. It is also likely pieces of old asphalt will be demolished and  
4 that, during the course of excavation and grading, old, abandoned utility pipes with ACM will  
5 be found. Workers who disturb ACM/LBP will be properly trained and certified by the State of  
6 Hawaii Department of Health. If additional suspect ACM is discovered during the removal  
7 process not identified in previous reports, the material shall not be disturbed until samples  
8 can be collected and analyzed, and, if positive, ACM will be properly removed and disposed of  
9 in accordance to all applicable state and federal regulations. To ensure that these substances  
10 would be managed properly, USAG-HI would prepare a Hazardous Materials Management  
11 Plan (HMMP) and a Spill Prevention Control and Countermeasures Plan (SPCCP).

12 There would be no impact to toxic and hazardous substances during the operational period as  
13 the facility use tempo and resultant HAZMAT and hazardous waste generation would not  
14 change.

## 4 Cumulative Impacts

This section 1) defines cumulative impacts, 2) describes past, present, and reasonably foreseeable future actions relevant to cumulative impacts, 3) analyzes the incremental interaction the preferred alternative may have with other actions, and 4) evaluates cumulative impacts potentially resulting from these interactions.

### 4.1 Definition of Cumulative Impacts

The approach taken in the analysis of cumulative impacts follows the objectives of NEPA, CEQ regulations, and CEQ guidance. Cumulative impacts are defined in 40 CFR section 1508.7 as the following:

“The impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

In addition, CEQ and USEPA have published guidance addressing implementation of cumulative impact analyses—Guidance on the Consideration of Past Actions in Cumulative Effects Analysis (CEQ, 2005) and Consideration of Cumulative Impacts in EPA Review of NEPA Documents (USEPA, 1999). CEQ guidance entitled *Considering Cumulative Impacts under NEPA* (1997) states that cumulative impact analyses should do the following:

“... determine the magnitude and significance of the environmental consequences of the proposed action in the context of the cumulative impacts of other past, present, and future actions...identify significant cumulative impacts ... [and] ... focus on truly meaningful impacts.”

### 4.2 Scope of Cumulative Impacts Analysis

In order to determine which past, present and future actions should be included in the cumulative impacts analysis, both the geographic extent of the effects and the time frame in which they are expected to occur were considered. For this EA, the project area defined the geographic extent of the cumulative impacts analysis. In general, the project area would include those areas previously identified in Section 3 for the respective resource areas. The future time frame for assessing cumulative impacts corresponds to the construction time frame of the proposed action.

Another factor considered is whether an action is “reasonably foreseeable.” For the purposes of this analysis, public documents prepared by federal, state, and local government agencies are the primary sources of information regarding reasonably foreseeable actions. Documents used to identify other actions include notices of intent for EISs and EAs, management plans, land use plans, and other planning related studies.

### 4.3 Past, Present, and Reasonably Foreseeable Future Actions

This section focuses on past, present, and reasonably foreseeable future actions at or near the project area which, in combination with the proposed action, could have a cumulative impact on the environment. “Actions” can include past, ongoing or planned projects, plans, initiatives, or operations of government or private sector entities.

To determine which actions to include in the cumulative impacts analysis, a determination was made whether a past, present or reasonably foreseeable action might interact with one of the affected resource areas addressed in this EA. If no potential relationship exists, the action was not evaluated. In accordance with CEQ guidance (2005), the actions that were excluded from further analysis are not catalogued here, as the intent is to focus the analysis on meaningful actions relevant to decision-making. Actions considered in this cumulative impacts analysis are listed below, and briefly described in Table 4-1.

- PTA Real Property Master Plan (RPMP)
- PTA Cantonment Facilities Improvement Program (FIP) utility components
- Daniel K. Inouye (DKI) Highway
- Stryker Brigade Combat Team (SBCT)
- Infantry Platoon Battle Course (IPBC)
- Hawaii Island Commercial Harbors and Airports
- Mauna Kea Observatories (including Thirty Meter Telescope)
- Changes in Military Training at PTA
- PTA Water Well



1 **Table 4-1 Past, Present, and Reasonably Foreseeable Future Actions**

| Action                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Year            |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Draft PTA Real Property Master Plan (RPMP) | <p>USAG-HI is in the process of preparing an RPMP for PTA in accordance with Army Regulation 210-20. The RPMP expresses a long-term commitment to provide high-quality, sustainable, enduring installations. It covers a 20-year planning horizon and provides the map to executing that commitment. The RPMP provides the Garrison Commander's strategy for meeting the challenges of operating under changing paradigms. These paradigms include antiterrorism and force protection; reduced manpower and resources; executing base realignments and closures; and maintaining troop readiness.</p> <p>RPMPs are comprised of several components: a digest, short and long range components, an installation design guide, and a capital investment strategy. Short and long range projects include the FIP (subject of this NEPA document), and a range other PTA repair and improvement projects elsewhere in the cantonment and PTA. The RPMP is still under development and all planning proposals reflected in the RPMP will be analyzed for potential environmental effects under a separate NEPA document, in accordance with Army Regulations.</p> <p>A summary of the planned short and long range projects to be analyzed in the RPMP EA include (location in parenthesis):</p> <p>Short Range Projects (0-7 years):</p> <ul style="list-style-type: none"> <li>- Cantonment Facilities Improvement Program (FIP) (including drainage, utility and building components)</li> <li>- Ammunition Holding Area 1-3 de-licensing (cantonment)</li> <li>- Training Complex (cantonment)</li> <li>- Fire Protection Improvements (BAAF)</li> </ul> <p>Kawaihae Harbor Ramp and Dolphin Repairs (Kawaihae Harbor)</p> <p>Unmanned Aerial System Hangar (Cooper Airstrip)</p> <p>Long Range Projects (8-20 years)</p> <ul style="list-style-type: none"> <li>- Pre-Positioned Storage Facilities (cantonment)</li> <li>- Tactical Vehicle Staging Area (cantonment)</li> <li>- Base X Tent City (cantonment)</li> <li>- Production Water Well (Location TBD)</li> <li>- Ammunition Supply Point Improvements (range)</li> <li>- Range Road Improvements (range)</li> </ul> <p>Aviation Gunnery Range (range)</p> | 20-year horizon |

| Action                                                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Year      |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Cantonment Facilities Improvement Program (FIP) (drainage and utility components) | <p>The Cantonment FIP includes both building components and utility components; the latter is not part of the proposed action addressed in this EA. The drainage, sewer, electrical and telecommunications improvements have already been approved under Records of Environmental Consideration (REC) and are underway or have been completed. They were described in Section 2 (pp. 2-6 to 2-8) of this EA.</p> <p>Cumulatively, the proposed action and the utility components represent a comprehensive plan to modernize and upgrade infrastructure at the cantonment in support of the PTA mission. There will be no change in land use, training capacity, operations or training tempo. Cumulatively, there will be beneficial cumulative impacts on operational efficiency, maintenance costs, and quality of life for military and civilian personnel at the PTA cantonment.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2016-2023 |
| Daniel K. Inouye (DKI) Highway                                                    | <p>The Saddle Road Improvement Project was initiated in 1992 by the Federal Highway Administration, Hawaii Department of Transportation (DOT) and the U.S. Army as a way to improve access to PTA and improve the linkage between the east and west sides of the island. The new highway replaces a dangerous, narrow, winding roadway with a modern, high-speed roadway that carried an estimated 4,000 vehicles per day in 2016 and is expected to carry 19,500 vehicles per day by 2035. The highway was renamed the Daniel K. Inouye (DKI) Highway in 2015. It is being constructed in five sections; the three sections between milepost 11 outside of Hilo and the Mamalahoa Highway are now operational. The section between Milepost 11 and Hilo is close to completion. The section between Mamalahoa Highway and the Queen Kaahumanu Highway is in the EIS stage and is expected to be operational in the next five to ten years.</p> <p>The highway was aligned to pass to the north of the PTA cantonment, and the segment of the old road passing through the cantonment was transferred to Army control. The re-alignment required the relocation of barracks and other uses in the highway corridor alignment to elsewhere within the cantonment, and a relocation of the main cantonment gate.</p> <p><b>Sources:</b> Saddle Road Extension Project Website: <a href="https://flh.fhwa.gov/projects/hi/saddle-ext/">https://flh.fhwa.gov/projects/hi/saddle-ext/</a> accessed April 8, 2018</p> <p>US Department of Transportation, Federal Highway Administration/Hawaii DOT-Highways, April 2017. Draft EIS, Saddle Road Extension, South Kohala, Hawaii (project Number DP-HI-0200C5).</p> | Ongoing   |

| Action                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Year      |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Stryker Brigade Combat Team           | <p>The Army selected Hawaii for the transformation of the 2nd Brigade, 25th Infantry Division to a Stryker Brigade Combat Team (SBCT) in 2008. The SBCT is a maneuver brigade that includes approximately 4,000 Soldiers (infantry, artillery, engineers, and other Army specialties) and 1,000 vehicles (including approximately 320 Stryker Wheeled Armored Vehicles). The SBCT was based at Schofield Barracks Military Reservation (SBMR) on Oahu and conducted periodic training at PTA, including an assortment of live-fire and non-live-fire maneuver training, fixed-position live-fire training facilities, infantry and engineer demolition training facilities, grenade training facilities, and an urban assault course.</p> <p>A number of facilities were constructed at PTA to support SBCT training including the Battle Area Complex, Tactical Vehicle Wash Facility, and acquisition of the Keamuku Maneuver Area (KMA), among others. In 2015, the Army decided to turn the SBCT back into an infantry brigade as part of a Congressionally-mandated, Army-wide downsizing to reduce the total number of active duty Soldiers by 40,000. The SBCT transformation back to an infantry brigade combat team (IBCT) resulted in a net loss of approximately 1,200 Soldiers stationed at SBMR and cessation of Stryker training at PTA.</p> <p><b>Sources:</b> FEIS/ROD (USAG-HI February/April 2008)</p> | 2008–2015 |
| Infantry Platoon Battle Course (IPBC) | <p>The Army is nearing completion of an Infantry Platoon Battle Course (IPBC) on the west side of PTA. The IPBC will be capable of supporting standard Infantry Platoon Live-Fire Training enabling units to accomplish their Mission Essential Task Lists using one range. The IPBC is part of a larger project termed the Infantry Platoon Battle Area (IPBA), which includes a MOUT (military operations in urban terrain), live-fire shoot house facility, as well as the IPBC. An IPBC supports a variety of light infantry training events, day and night, such as reconnaissance and security, movement to contact, attack, raid, ambush, defend, and retrograde operations. An infantry platoon training on the IPBC would move from objective to objective while engaging targets.</p> <p>The entire developed footprint of the IPBC is approximately 110 acres and includes an unpaved access road to the IPBC, the Range Operations Control Area, objectives with instrumented targetry that Soldiers engage during training exercises, and maneuver lanes (trails that Soldiers and their equipment use to move down the course to engage objectives). An access road and electricity and telecommunication lines are being constructed from nearby facilities.</p> <p><b>Sources:</b> FEIS/ROD (USAG-HI March/June 2013)</p>                                                                                | Ongoing   |

| Action                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Year    |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Hawaii Island Commercial Harbors                    | <p>Hawaii DOT-Harbors maintains long range development plans for Hawaii County's two commercial harbors (Kawaihae and Hilo) to ensure the needs of the island population for import and export and dynamically provide for changing needs in the State and the island economic sectors including but not limited to agriculture, tourism, retail, and military.</p> <p>The Army maintains a landing ramp and storage yard at Kawaihae Harbor where materiel associated with PTA training activities is shipped through. Cargo is also shipped to and from PTA via the commercial ports. Dolphin and ramp repairs are programmed for this facility by the Army.</p> <p>The USAG-HI has a project to repair Army berthing and mooring infrastructure at Kawaihae Harbor to support military vessels that transport personnel, equipment and supplies to PTA. The project includes replacement of one mooring dolphin, fender repairs on two mooring dolphins, and repair of an existing ship landing ramp.</p> <p><b>Sources:</b> Hawaii DOT Harbors 2035 Master Plan Update (DOT-H August 2011) and FEA/FONSI for improvements to Kawaihae Harbor (DOT-H October 2013)</p> | Ongoing |
| Hawaii Island Commercial Airports                   | <p>Hawaii DOT-Airports manages two main International Airports in Hawaii County: Hilo and Kailua-Kona, and other smaller facilities at Waimea and Upolu. Air travel into the Kailua-Kona airport is rapidly expanding while the Hilo airport is fairly stable. A major terminal modernization at Kailua is planned to address growing demand along with a new aircraft rescue and firefighting station. There are also plans to construct a similar facility at the Hilo airport.</p> <p>Soldiers training at PTA often arrive and depart the island via commercial aircraft landing at either the Hilo or Kona, and then transported to PTA via commercial ground transportation vendors.</p> <p><b>Sources:</b> Kona International Airport Master Plan (DOT-A October 2010)<br/>Hilo International Airport Master Plan (DOT-A November 2001)<br/>First Hawaii Bank Economic Forecast Hawaii Island Edition 2015-2016</p>                                                                                                                                                                                                                                                | Ongoing |
| Mauna Kea Observatories<br>(Thirty Meter Telescope) | <p>The University of Hawaii (UH) leases sites atop Mauna Kea to international observatories. UH economists estimate that the \$59 million in annual spending by the observatories and their operations created \$92 million in local output, \$28 million in local income and 806 jobs in 2012 (First Hawaiian Bank 2016). The Thirty Meter Telescope (TMT) planned by the University of</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ongoing |

| Action | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Year |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|        | <p>California and the California Institute of Technology, is undergoing a protracted and controversial permit process with the State of Hawaii. If built, the TMT is estimated to add \$20 million in local spending, \$10 million in local income and 275 new jobs. As part of its stewardship responsibilities, UH is in the process of decommissioning two observatories that will eliminate \$2 million in spending and 11 local jobs.</p> <p>Before construction of the TMT can start, a Conservation District Use Permit (CDUP) must be granted by the state Board of Land and Natural Resources and an appeal to the Hawaii Supreme Court must be resolved. In 2010, the University of Hawaii-Hilo applied for the permit. The Land Board voted to approve the permit, but at the same time ordered a contested case hearing be held. In early 2013, the Land Board approved the permit that was then successfully challenged in court. In December 2015, the state Supreme Court agreed with the opponents, ordering the Land Board to begin the contested case process anew and refrain from voting on the permit until after the hearing had run its course. The second contested case hearing extended over six months. In July 2017, the judge filed a recommendation that the Land Board grant the CDUP, and a revised permit was approved in September 2017. However, continuing protests by public opponents have prevented the project from beginning construction.</p> <p>In March 2018, the Hawaii State Senate passed a bill, SB 3090, to establish a Mauna Kea Management Authority and to limit the number of telescopes authorized on Mauna Kea. The Senate bill failed to pass.</p> <p>TMT officials have said they plan to build the telescope in Spain's Canary Islands if they are unable to build in Hawaii.</p> <p>The Mauna Kea summit is considered a sacred place by many native Hawaiians. Many of those opposed to the TMT project would like to see the existing observatories removed and the mountaintop restored to its pre-development state. Public opinion polls indicate the majority of Hawaii residents support the scientific objectives of the observatories and the value the observatories bring to the state's economy and international prestige.</p> <p><b>Sources:</b> First Hawaii Bank Economic Forecast Hawaii Island Edition 2015-2016; Hawaii Tribune Herald "Poll Measures support TMT project" November 10, 2015.</p> <p>Honolulu Civil Beat. The Stage Is Set For Tuesday's Thirty Meter Telescope Hearing by Patricia Tummons. October 14, 2016.</p> |      |

| Action                                                                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Year     |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|                                                                                              | Hawai'i Public Radio. Public Hearing Conducted on Bill Proposing New Management of Mauna Kea. February 13, 2018.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |
| Department of Hawaiian Home Lands (DHHL)<br>Humuula/<br>Piihonua tracts<br>(neighbor of PTA) | <p>DHHL manages approximately 117,000 acres of land in Hawaii County and its Humuula/Piuhonua tracts, located to the east of PTA, are the largest contiguous parcels under its jurisdiction. The area is made up of approximately 56,200 acres located on the northeast slopes of Mauna Kea, between the 4,500- and 9,000-foot elevations. The Humuula parcel is approximately 49,100 acres in size and the Piuhonua parcel, located adjacent to the eastern boundary of Humuula, is approximately 7,078 acres in size. Ainahou, comprising approximately 11,124 acres, is the subsection of Humuula south of Saddle Road and is currently under license to the State of Hawaii, Department of Land and Natural Resources.</p> <p>DHHL seeks to restore portions of the Humuula/ Piuhonua lands in perpetuity to conserve these native forests and natural habitats for future generations. DHHL believes that the Humuula/Piuhonua lands have the potential for serving as a sustainable native forest and land unit by simultaneously providing environmental, economic and social benefits to the trust and its beneficiaries, in perpetuity by linking traditional cultural knowledge and modern science. The plan is a mix of conservation and land stewardship, low-density development and commercial forestry and grazing.</p> <p>Development plans include the first rural-development homestead area for DHHL beneficiaries in the south-eastern portion of the property. Preliminary design concepts call for a subdivision layout encompassing approximately 1,000 acres with a total of approximately 100 to 200 homestead sites and other community uses.</p> <p>DHHL's Humuula Sheep Station Adaptive Reuse Plan proposes a mix of land uses, wherein the property is divided into three principal sub-areas: Historic/Community Center (5.5 to 6.0 acres); Open Campground (2.0 to 2.5 acres) and Commercial (7.0 to 8.0 acres), including retail, recreational, lodgings, and restaurant activities appropriate to a transient or visitor market.</p> <p><b>Source:</b> Department of Hawaiian Home Lands Aina Mauna Legacy Program (Hookuleana LLC December 2009)</p> | Proposed |

| Action                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Year                                         |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Mauna Kea Recreational Area (neighbor of PTA) | The County of Hawaii Department of Parks and Recreation has proposed a project to improve the potable and non-potable water systems, recreational cabins, access, parking, landscaping, park amenities, and security and maintenance facilities of the Mauna Kea Recreation Area (MKRA), with the goal of once again providing a high altitude recreational site that serves diverse recreational needs in a safe, efficient, environmentally appropriate and equitable manner. The MKRA is located 0.7 miles to the east of the cantonment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                              |
| Changes in Military Training at PTA           | <p>In July 2015, the Army announced the 25th ID Stryker Brigade Combat Team (SBCT) was to be converted by a Light Infantry Brigade Combat Team (LIBCT) with two maneuver battalions (one less than the SBCT). The LIBCT will train at PTA.</p> <p><b>Source:</b> Hawaii News Now July 9, 2015</p> <p>The US Marine Corps continues to fly C-130 aircraft in and out of BAAF. MCBH is receiving two MV-22 squadrons, replacing its CH-46E helicopters, and the new units will also train at PTA. The Marines recently expanded BAAF's Bravo helipad to accommodate the MV-22 aircraft and upgraded existing landing zones. <b>Source:</b> Final EIS for Basing MV22 and H1 Aircraft in support of III MEF Elements in Hawaii (USMC June 2012). The Marines hold several annual training events at PTA including Lava Viper and Dragon Fire, as well as participating in the biennial, multiservice, Rim-of-the-Pacific Exercise utilizing the PTA range.</p> <p>The 25th ID Combat Aviation Brigade is receiving 24 Apache (AH-64D) and unmanned aerial systems—replacing 30 Kiowa helicopters. The new aircraft will also train at PTA.</p> <p><b>Source:</b> U.S. Pacific Command press release (April 24, 2016)</p> | <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> |



| Action         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Year     |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| PTA Water Well | <p>The University of Hawaii (UH), in partnership with the Army, initiated the Humuula Saddle Hydrologic Study Project in 2012 to develop an improved understanding of the Hawaii County groundwater system to improve management practices of the island's groundwater resource and enable regional stakeholders to make more efficient use of the resources at their disposal.</p> <p>In 2015, UH researchers developed a successful test well within the PTA cantonment and encountered an aquifer that began at an elevation of about 4,600 feet above sea level.</p> <p>The next step for the Humuula Saddle Hydrologic Study Project is a second drill site several miles from the first, to measure the extent of the groundwater discovered. If that test well proves successful, it will also provide strong support for high level water beneath a large tract of Department of Hawaiian Home Lands property on the eastern side of the Humuula Saddle where their lessees have long needed a reliable source of water for ranching operations.</p> <p>A developable groundwater resource in the Saddle area would benefit the Army, which currently spends approximately \$0.9 million/year to truck water to PTA from a Hawaii County Department of Water Supply source in Waimea, as well as expanding the range of options available for the DHHL's Humuula/Piihonua lands to the east of PTA .</p> <p><b>Sources:</b> Humuula Saddle Region Hydrologic-Evaluation-and-Exploratory Drilling Project Final EA/FONSI (UH March 2014)</p> <p>Hawaii News Now.Com, 2015. Scientists find groundwater reserve under Pohakuloa. January 24, 2015, accessed September 29, 2016.</p> <p>University of Hawaii News, 2015. Large fresh water supply discovered by UH researchers on Hawaii Island. January 23, 2015.</p> | Proposed |

#### 4.4 Assessment

From a cumulative perspective, the Army's investment in implementing the FIP proposals, including the proposed action, recognizes PTA's important operational role in national security, and is an acknowledgment that the existing cantonment facilities are functionally inadequate and require replacement and/or substantial upgrades, while at the same time maintaining an austere training environment. From an environmental perspective, the modernization project is considered an "infill" project, within a previously developed site, that does not involve a change of primary use or increase in size or intensity. The preferred alternative would bring the entire cantonment up to current codes and reduce the gap between DoD standards and actual conditions, increasing the readiness, security and safety of personnel working and training there. The adaptive reuse approach being followed in the preferred alternative seeks to minimize the amount of new construction and the attendant

resources consumed by new construction activities. The proposed action will not result in a change in personnel loading (fluctuations that influence an array of potentially indirect and cumulative effects on public infrastructure and services), and the proposed action does not require offsite infrastructure improvements such as major road construction, downstream wastewater treatment conveyance and treatment system improvements, or new potable water source and storage systems.

Sustainable design practices incorporated in the overall FIP modernization would increase overall energy efficiency, reduce overall water use and wastewater flow, and increase stormwater detention and stormwater quality—in effect reducing the long-term overall impact of the cantonment on the environment. Construction-period activities, as discussed earlier in this EA, would generate short-term impacts that would be avoided or minimized by following best management practices.

Based on a review of the foreseeable projects, the proposed action will have less than significant cumulative effects on the relevant resource areas because of the geographic distances involved, because it continues a historic use within a previously developed area, and because there will be no change in intensity or land use. Direct and indirect impacts associated with the proposed action described in Section 3 include temporary increases local traffic volumes, ambient noise levels, stormwater runoff potential, and fugitive dust and vehicular exhaust emissions. Best management practices and other minimization measures will be implemented during the construction period to minimize these temporary effects to less than significant levels. Temporary increases in construction employment would be small relative to the size of the local labor force but would still provide a beneficial cumulative impact by providing a steady stream of construction jobs for eight years.

The modernized facilities will reduce the level of effort needed to maintain, repair, and sustain the aging temporary facilities. The proposed action, coupled with other recent or reasonably foreseeable future projects, would have a less than significant cumulative impact on climate, air quality, noise, topography, soils, or flood hazard parameters, and a less than significant cumulative impact on Hawaii County's biological, water, scenic, or visual resources. Cumulative impacts on land use, infrastructure and socio-economic conditions would be less than significant.

The proposed recapitalization of the cantonment facilities and infrastructure systems will extend the economic life of the post. By maintaining basic quality of life for personnel who train at PTA, it will also support the military training mission. The proposed investment reflects the Army's long term commitment to PTA as a national training asset, and makes it less likely that the Army will reduce its presence at, and commitment to PTA. This added stability, in turn, would have a beneficial cumulative impact on the Hawaii County economy through the direct and indirect employment provided by PTA.

The capital investment could contribute to significant cumulative impacts on land use in the Saddle Region when combined with forecasted travel growth on DKI Highway through the region (4,000 vpd in 2016 to 19,500 vpd in 2035); potential development stimulated by potable water wells currently being tested by University of Hawaii scientists; and projected population and economic growth in surrounding areas. The Hawaii County General Plan and Community Development Plans provide a means for the County to manage the rate of change in the region. By avoiding and minimizing sprawl, excessive growth, and development pressures on resources, the County can achieve its vision for a desired end state. Through

County and State land use controls, cumulative impacts on land use can be reduced to less than significant levels.

The proposed action is independent of the types of training and tempo of range activities taking place at PTA. This training tempo is driven by national security threat assessments and the ebb and flow of international affairs. The recent relocation of Hawaii's Stryker Brigade back to the Continental U.S. is an example of the constant rebalancing the Department of Defense conducts to maintain a stable defense posture, and these types of actions are unrelated to the condition of the cantonment.

Cumulative Effects of Climate Change: Though individual projects are unlikely to have significant impacts on global climate change, they collectively may have cumulative effects when their individual GHG emissions are combined over time. The preferred alternative would generate GHG emissions during demolition, renovation, and construction work. However, most of these GHG emissions would be temporary in nature and can be minimized through BMPs. Operation of the modernized cantonment would generate GHG primarily from vehicle exhaust and indirect consumption of electrical power; however, this does not represent an increase over current levels since personnel loading and associated privately-owned vehicle traffic is not expected to change due to the redevelopment period.

#### **4.5 Conclusions**

The construction of FIP utility and building improvements will have temporary, construction related impacts that are less than significant. Once completed, all FIP improvements will have a less than significant cumulative impact on the natural and manmade environment.

## **5 Other Considerations Required by NEPA**

In addition to the analyses discussed in Section 3, NEPA requires additional evaluation of the project's impacts including the relationship between short-term uses and long-term productivity and any irreversible or irretrievable commitment of resources. Additionally, Section 5 confirms the absence of any significant unavoidable adverse effects or required mitigation measures for the proposed action and provides a discussion of the proposed action's consistency with the CZMA.

### **5.1 Relationship between Short-Term Uses and Long-Term Productivity**

NEPA requires an analysis of the relationship between a project's short-term impacts on the environment and the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. This refers to the possibility that choosing one development site reduces future flexibility in pursuing other options or that using a parcel of land or other resources often eliminates the possibility of other uses at that site.

Army funding resources dedicated to the upgrade of buildings and utilities will not be available for other uses. In the short-term, effects to the human environment with implementation of the preferred alternative would primarily relate to the construction activity itself. Construction-related noise and periodic cantonment traffic and utility disruptions have been identified as short-term consequences. In the long-term, the modernized cantonment will improve the quality of life and safety of Army personnel. There will be an increase to long-term productivity due to energy savings, reduced repair and maintenance costs, and more efficient operations. Because it doesn't change the function or capacity of the existing cantonment, the proposed action line would not significantly impact the long-term natural resource productivity of the area. The preferred alternative would not result in any impacts that would significantly reduce environmental productivity or permanently narrow the range of beneficial uses of the environment.

### **5.2 Irreversible or Irretrievable Commitment of Resources**

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that this use could have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource that could not be replaced within a reasonable time frame (e.g., fossil fuels and minerals). Irretrievable resource commitments involve the loss in value of an affected resource that could not be restored as a result of the action (e.g., the extinction of a threatened or endangered species and the disturbance of a cultural resource).

Irreversible commitments of resources for the proposed action include the non-renewable or slowly renewable natural resources needed to manufacture, transport, and construct the new facilities and appurtenances. These resources would not be available for other uses. However, the consumption of these resources would not represent an unnecessary, inefficient, or wasteful use of resources, nor would it prevent sustainable development. The project area encompasses lands that have been previously disturbed and have long been used for the Army's cantonment purposes. There are no threatened or endangered species of plants or wildlife that inhabit the project site, and there would be no impact to coastal resources. No

significant archaeological or cultural resources are anticipated and Native Hawaiian (or other ethnic groups) cultural practices would not be impacted. The proposed action extends the economic life of existing cantonment facilities and improves the quality of life and building safety for Army personnel deployed there. It does not involve development of previously undeveloped sites or expansion of existing facilities.

### **5.3 Significant Unavoidable Adverse Effects**

An EA must include a description of any significant unavoidable impacts for which no mitigation, or only partial mitigation, is feasible. The preferred alternative would not result in any significant unavoidable impacts for which no mitigation is required; all impacts would be less than significant.

### **5.4 Mitigation Measures**

Impacts would be less than significant for all resources, so no long-term mitigation measures are required or proposed. All proposed activities comply with existing regulations, permits, and plans. Best management practices and design measures that minimize adverse effects would be implemented for the following resources: air quality, traffic, water resources, biological resources, and hazardous and toxic substances.

### **5.5 Coastal Zone Management Act**

The federal Coastal Zone Management Act (CZMA) of 1972 establishes a federal-state partnership to provide for the comprehensive management of coastal resources. Coastal states and territories develop site-specific coastal management programs based on enforceable policies and mechanisms to balance resource protection and coastal development needs. The Hawaii Coastal Zone Management Program lays out the policy to guide the use, protection, and development of land and ocean resources within the state's coastal zone. Under the CZMA, federal activity in, or affecting, a coastal zone requires preparation of a Coastal Zone Consistency Determination or a Negative Determination. In other words, any federal agency proposing to conduct or support an activity within or outside the coastal zone that will affect any land or water use or natural resource of the coastal zone is required to do so in a manner consistent with the CZMA or applicable state coastal zone program to the maximum extent practicable.

The Army has concluded that the construction and use of the FIP improvements will not affect the coastal uses or resources and therefore, does not require a consistency determination. A federal consistency determination is not required because the proposed action will take place on federal land, which is excluded from the coastal zone, per Section 304 of the CZMA. All construction activities will occur within the established cantonment.

An analysis of the impacts of the proposed action on the coastal zone concluded that the implementation of the FIP would have no effect on coastal uses or resources of Hawaii. Applicable best management practices and permit requirements will be strictly adhered to during construction and operation of the cantonment. Additionally, no direct, indirect, or cumulative effects resulting from the construction and operation of the cantonment are anticipated to impact the state's coastal zone. The Army has notified the Hawaii Coastal Zone Management Program of its Negative Determination in a letter dated February 27, 2018 (Appendix C).

## 5.6 Compliance with Other Executive Orders

EO 13693 Planning for Federal Sustainability in the Next Decade (March 19, 2015) revokes EO 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" (October 5, 2009) and EO 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" (January 23, 2007). The goal of EO 13693 is to maintain federal leadership in sustainability and GHG emission reductions. Beginning in FY 2016, federal agencies, where life-cycle cost effective, must promote building energy conservation, efficiency, and management by reducing the agency's building energy intensity by 2.5% annually through the end of fiscal year 2025, relative to the agency's baseline building energy use in fiscal year 2015. The agencies must also meet specified goals to ensure that total electric and thermal energy use comes from renewable electric energy and alternative energy.

As noted in Section 3.7, the proposed action is an infill, redevelopment project that will likely be more GHG-efficient than the existing cantonment through the incorporation of modern, low flow plumbing fixtures, energy efficient lighting and electrical system components. The no-action alternative would forego construction-period GHG emissions but would continue to utilize buildings with outmoded plumbing, lighting and electrical equipment. This would generate higher rates of GHG emissions than the proposed action. The preferred alternative includes the replacement of energy inefficient buildings with new structures with energy efficient utility systems which will reduce ongoing maintenance.

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## **APPENDIX A1**

### **Section 106 National Historic Preservation Act Consultation**

#### ***for Archaeological Resources (at or below ground surface level)***

- Hawaii Department of Land and Natural Resources, State Historic Preservation Division (SHPD) Letter to USAG-Pohakuloa, dated April 8, 2016. (concurrence with determination of no historic properties affected)
- USAG Pohakuloa Letter to State Historic Preservation Officer, dated February 9, 2016. With attachments. (determination of no historic properties affected for facilities at or below ground surface level)

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HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

April 8, 2016

Jacob A. Peterson  
Lieutenant Colonel, US Army Commanding  
Department of the Army  
Headquarters, United States Army Garrison, Pōhakuloa  
PO Box 4607  
Hilo, Hawaii 96720-0607

IN REPLY REFER TO:  
Log No. 2016.00343  
Doc. No. 1603MB37  
Archaeology, Architecture  
**"No Historic Properties Affected"**

Dear Lieutenant Colonel Peterson,

SUBJECT: **National Historic Preservation Act (NHPA) Section 106 Review –  
Request for Concurrence of "No Historic Properties Affected"  
Pōhakuloa Training Area Cantonment and Bradshaw Army Airfield Improvement Plan  
Ka'ōhe Mauka Ahupua'a, Hāmākua District, Island of Hawai'i  
TMK: (3) 4-4-016:006**

Thank you for the opportunity to comment on the request by the U.S. Army Garrison, Pōhakuloa (USAG-PTA) for the State Historic Preservation Officer's (SHPO) concurrence of "no historic properties affected" for the proposed improvements to the Pōhakuloa Training Area (PTA) Cantonment and Bradshaw Army Airfield (BAAF) facilities. USAG-PTA has determined that this project is an undertaking as defined in 36 CFR 800.16(y) and as being subject to the National Historic Preservation Act (NHPA). SHPD received this submittal request on February 12, 2016. SHPD requested additional information in correspondence dated March 11, 2016 (Log No. 2016.00343, Doc. No. 1603SL07). The requested information was received via email on March 18, 2016.

The undertaking involves repair and improvement to the electrical system, communication systems, wastewater disposal system, storm water drainage, reconfiguration and installation of fence lines and surface grading for parking other uses. Project work will include surface grading and leveling and subsurface excavation to install utility systems.

The area of potential effect (APE) consists of the PTA Cantonment, the BAAF, and the intervening area. The submittal indicates that portions of the APE have been subjected to archaeological surveys and several archaeological monitoring projects; none yielded evidence of archaeological sites or deposits. Further, it is argued that based on this "random sampling" it is "reasonable to conclude that the non-surveyed areas do not contain historic properties."

The initial submittal did not include information regarding the efforts to identify potential architectural historic properties within the APE. Additional information was received by SHPD on March 18, 2016 which included the PTA architectural survey and APE maps indicating the location of architectural historic properties. The APE includes buildings which fall under the Unaccompanied Personnel Housing Program Comment, buildings less than 45 years in age, and unevaluated buildings. Based on the survey information provided, some of the buildings shown as unevaluated on the APE map may be eligible for listing on the National Register of Historic Places (NRHP). As described in the scope of work, the utility improvements will be external and will enter buildings through existing connections. Additionally, the NHPA Section 106 initiation letter states that modifications to the buildings will be part of another, separate Section 106 consultation.

Lt. Col. Peterson  
April 8, 2016  
Page 2

In accordance with 36 CFR part 800.4(d)(1) the historic properties within the APE will not be affected by this undertaking. Based on the materials provided for our review, the State Historic Preservation Officer (SHPO) **concurs** with the Department of the Army's determination of **no historic properties affected**.

The USAG-HI is the office of record for this undertaking. Please maintain a copy of this letter with you environmental review record for this undertaking. Please reference our project number in any communication with this office regarding this understanding.

Please contact Megan Borthwick at (808) 692-8029 or at [Megan.Borthwick@hawaii.gov](mailto:Megan.Borthwick@hawaii.gov) for any questions regarding architectural resources. Please contact Susan Lebo, Archaeology Branch Chief, at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) for any changes in the project APE or scope of work or questions or concerns regarding this letter.

Mahalo,

A handwritten signature in dark ink, appearing to read "Alan S. Downer", followed by a long horizontal line extending to the right.

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer

cc: Dr. Julie M. Taomia, PTA Archaeologist ([Julie.m.taomia.civ@mail.mil](mailto:Julie.m.taomia.civ@mail.mil))



DEPARTMENT OF THE ARMY  
HEADQUARTERS, UNITED STATES ARMY GARRISON  
PŌHAKULOA  
PO BOX 4607  
HILO, HAWAII 96720-0607

FEB 09 2016

REPLY TO  
ATTENTION OF

Office of the Commander

SUBJECT: National Historic Preservation Act Section 106 Compliance Regarding Pōhakuloa Training Area Cantonment and Bradshaw Army Airfield Facilities Improvement Plan, Ka'ohē Ahupua'a, Hāmākua District, Hawai'i County, Hawai'i Island, Hawai'i TMK:[3] 4-4-016:006. Archeology.

Ms. Suzanne Case  
State Historic Preservation Officer  
State Historic Preservation Office  
Kakuhihewa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, HI 96707

Dear Ms. Case:

As Commander of the United States Army Garrison, Pōhakuloa (USAG-Pōhakuloa) I am writing to initiate consultation under Section 106 of the National Historic Preservation Act on a proposed undertaking for improvements to the Pōhakuloa Training Area (PTA) Cantonment and Bradshaw Army Airfield (BAAF) facilities at or below ground surface level. A facilities improvement plan, which is being incorporated into the Real Property Master Plan, has been promulgated for the improvement of the facilities at PTA and BAAF. The consulting parties listed at Enclosure 1 are simultaneously receiving a copy of this letter as part of the Section 106 consultation process, and their comment has been requested within thirty days of receipt of the letters.

I have determined that this project constitutes an undertaking as defined under 36 CFR Part 800.16(y). The undertaking consists of repair and improvement to the electrical system, communications systems, wastewater disposal system, storm water drainage, reconfiguration and installation of fence lines and surface grading for parking and other uses at PTA. A separate consultation will be conducted for modifications to the buildings at PTA that are proposed in the facilities improvement plan. This undertaking will bring the utilities and other facilities up to current standards and meet current and foreseeable needs. The utility improvements will all be external to the buildings and will enter the buildings through existing connections.

The projects will require excavation as well as surface grading and levelling. The area of potential effects (APE) consists of the PTA Cantonment, BAAF and the area between as depicted in the map at Enclosure 2. The undertaking will include excavations to install a modern wastewater system that meets current Environmental Protection Agency standards and requirements. The drainage system in the APE will be cleaned out and improved to prevent flooding of the buildings, which has been a chronic issue. Portions of the electrical and communications systems will be placed underground and upgraded to modern standards. The projects are in various stages of planning; Enclosure 3 illustrates the current engineering plans for the projects that have progressed to this point. Geotechnical testing and other

probing may be required in advance of the actual construction projects to inform final project design and planning.

Geologically most of the APE is classified as surficial deposits, alluvium and colluvium deposited by wind and water from the surrounding landscape and the slopes of Mauna Kea. This process has continued since the construction of the Cantonment and BAAF in the 1950s, resulting in buried building foundations that were at the surface level at the time of construction. The remainder of the APE is Laupahoehoe volcanics deposited 14000 to 65000 years ago by Mauna Kea eruptions. Pu'u Pōhakuloa on the northern boundary of the eastern portion of the APE is a scoria cone that derived from Mauna Kea eruptions between 14000 and 65000 years ago.

Portions of the APE have been the subject of archaeological surveys, as depicted by Enclosure 4. The APE has been modified by recent military activity associated with the air field and the Cantonment, as illustrated by the aerial photograph at Enclosure 5. Archeological monitoring has also been conducted for several projects within the APE. None of the archeological projects have identified any archeological deposits in the APE, or other archeological sites. Due to the random sampling of the APE by these projects and the consistency of soils across the area it is reasonable to conclude that the unsurveyed areas do not contain historic properties. Reports of the surveys and monitoring projects are included on the enclosed CD.

Based on previous archaeological surveys and the random sampling of the archaeological monitoring projects across the APE, I have determined that there will be no effects to historic properties as a result of this undertaking. Please respond within 30 days of receipt of this letter with concurrence or to request additional information. Should you require additional information about this project, the point of contact is Dr. Julie M. E. Taomia, USAG-P Archeologist, at telephone number (808) 969-1966 or by email at [julie.m.taomia.civ@mail.mil](mailto:julie.m.taomia.civ@mail.mil).

Sincerely,



Jacob A. Peterson  
Lieutenant Colonel, US Army  
Commanding

Enclosures



## **APPENDIX A2**

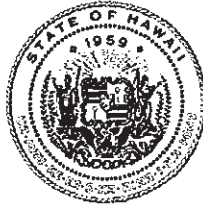
### **Section 106 National Historic Preservation Act Consultation**

#### ***for Architectural Resources (buildings and structures above ground)***

- Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) Letter to USAG-Hawai'i, dated March 20, 2018 (concurrence with Army determination of "no historic properties affected" for replacement of Quonset huts)
- USAG Hawaii Letter to DLNR State Historic Preservation Officer, dated March 1, 2018, (USAG-HI finding of "no historic properties affected" and request for concurrence). With the following enclosures:
  - Enclosure 1: Previous correspondence
  - Enclosure 2: Correspondence with the Keeper of the National Register
  - Enclosure 3: Letter sent to interested parties



DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
STATE HISTORIC PRESERVATION DIVISION  
KAKUHIHEWA BUILDING  
601 KAMOKILA BLVD, STE 555  
KAPOLEI, HAWAII 96707

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

JEFFREY T. PEARSON  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT

ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

March 20, 2018

**LOG NO: 2018.00547**  
**DOC NO: 1803MB06**  
Architecture

Colonel Stephen E. Dawson  
Department of the Army  
U.S. Army Installation Management Command- Pacific  
Headquarters, United States Army Garrison, Hawai'i  
745 Wright Avenue, Building 107, Wheeler Army Airfield  
Schofield Barracks, Hawai'i 96857-500

Dear Colonel Dawson:

**SUBJECT: National Historic Preservation Act (NHPA) Section 106 Historic Preservation Review**  
**Facility Improvement Program – Replacement of Quonset Huts**  
**Pōhakuloa Training Area**  
**Ka'ohe Ahupuaa, Hāmākua District, Island of Hawai'i**  
**TMK: (3) 4-4-016:001**

Thank you for the opportunity to comment on this request from the Department of the Army (Army) for concurrence with the Army's determination of "no historic properties affected" for the replacement of the Quonset Huts as part of the Pōhakuloa Training Area (PTA) Facility Improvement Program. The Army has determined that this project is an undertaking as defined in 36 CFR 800.16(y) and that the Area of Potential Effects (APE) is approximately 536 acres including the cantonment area and Bradshaw Army Airfield. The State Historic Preservation Division (SHPD) received this submittal on March 2, 2018.

SHPD previously concurred with the Army's determination of "no historic properties affected" for ground disturbing activity associated with the Facility Improvement Program, which included repairing the electrical, communication, wastewater disposal, and storm water drainage systems, reconfiguring existing and installing new fence lines, surface grading, and excavating for utility lines [Log No. 2016.00343, Doc No. 1603MB37]. The current proposed project includes replacing the existing quonset huts and other buildings with one-story, concrete masonry units within the cantonment area.

After continued consultation, the Army determined the quonset huts not eligible for inclusion on the National Register of Historic Places as a district and the Keeper of the National Register agreed on January 18, 2018.

Per 36 CFR 800.4(d)(1), the Army finds that there are no historic properties present, and therefore the SHPO concurs with the Army's determination of "no historic properties affected".

Please contact Megan Borthwick at [Megan.Borthwick@hawaii.gov](mailto:Megan.Borthwick@hawaii.gov) or (808) 692-8029 for questions regarding architectural resources or this letter.

Colonel Stephens  
3/20/18

Mahalo,  
*Alan Downer*

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
U.S. ARMY INSTALLATION MANAGEMENT COMMAND-PACIFIC  
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII  
745 WRIGHT AVENUE, BUILDING 107, WHEELER ARMY AIRFIELD  
SCHOFIELD BARRACKS, HAWAII 96857-5000

MAR 01 2018

Office of the Garrison Commander

SUBJECT: National Historic Preservation Act Section 106 Consultation for Facility Improvement Program at the Pohakuloa Training Area; Ka'ohē Ahupua'a, Hāmākua District, Island of Hawai'i [TMK: (3) 4-4-016:001], Architecture Review

Dr. Alan Downer  
Deputy State Historic Preservation Officer  
State Historic Preservation Division  
Department of Land and Natural Resources  
Kakuhīhewa Building, Room 555  
601 Kamōkila Boulevard  
Kapolei, Hawaii 96707

Dear Dr. Downer,

U.S. Army Garrison, Hawaii (USAG-HI) is writing to continue consultation on the Facility Improvement Program of Pohakuloa Training Area (PTA) on the Island of Hawai'i. Consultation with the Hawaii State Historic Preservation Division (SHPD) and other interested parties was previously initiated via a letter dated June 15, 2016. In that letter, USAG-HI concluded that the buildings within the Area of Potential Effect (APE) were not eligible for inclusion on the National Register of Historic Places (National Register). SHPD had previously concurred that there were no eligible archeological sites within the APE (letter dated April 8, 2016 Log No. 2016.00343 Doc. No. 1603MB37).

This consultation raised the topic of the eligibility of 34 buildings and of a potential historic district including an additional 79 buildings, all within the APE. In the letter dated July 19, 2016, SHPD requested more information and a site visit. After the site visit and an additional letter from the Army with clarifying information, the SHPD did not concur with the Army's determination of eligibility for the buildings (letter dated March 2, 2017 letter, Log # 2017.00227 / Doc # 1703MB02) (See Enclosure 1 for previous correspondence).

In accordance with 36 CFR 63.2 and with 36 CFR 800.4(c)(2), the USAG-HI sought the opinion of the Keeper of the National Register of Historic Places (the Keeper) regarding this topic in a letter dated June 27, 2017. The Keeper replied on August 17, 2017 stating that the 34 buildings in question were not individually eligible for listing on the National Register. Also, the letter requested additional information regarding the potential historic district. In a letter dated November 27, 2017, the USAG-HI answered the Keeper's questions. The Keeper replied, on January 18, 2018, with a Determination

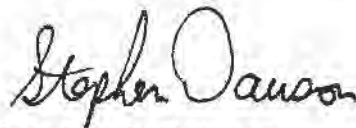


of Eligibility Notification stating that the potential of a PTA historic district was not eligible for listing in the National Register (See Enclosure 2 for correspondence with the Keeper).

Taking into account the Keeper's findings of non-eligibility, USAG-HI is repeating the finding of *No Historic Properties Affected* for this undertaking and requesting your concurrence. Additionally, a copy of this letter has been sent to interested parties (Enclosure 3).

If you have any questions, please contact Ms. Rhonda Suzuki, Environmental Division Chief, with the Directorate of Public Works, at [rhonda.l.suzuki.civ@mail.mil](mailto:rhonda.l.suzuki.civ@mail.mil).

Sincerely,

A handwritten signature in black ink that reads "Stephen Dawson". The signature is written in a cursive, flowing style.

Stephen E. Dawson  
Colonel, US Army  
Commanding

Enclosures

# ENCLOSURE 1



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
US ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION  
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII  
745 WRIGHT AVENUE, BUILDING 107, WHEELER ARMY AIRFIELD  
SCHOFIELD BARRACKS, HAWAII 96857-5000

10/15/13

Office of the Garrison Commander

SUBJECT: Determination of Eligibility of Buildings at the Pohakuloa Training Area (PTA); Hamakua District; TMK 04-04-16; Island of Hawaii; State of Hawaii

Dr. Alan Downer  
Deputy State Historic Preservation Officer  
State Historic Preservation Division  
Kakuhihewa Building, Room 555  
Kapolei, HI 96707

Dear Dr. Downer,

The US Army Garrison, Hawaii (USAG-HI) is writing to open consultation, pursuant to Section 106 of The National Historic Preservation Act of 1966, on the eligibility of all the buildings within the cantonment area of PTA. The Area of Potential Effect (APE) is approximately 563 acres and is shown on the enclosed map (Enclosure 1). Most of the buildings within the cantonment area are Quonset huts.

In fulfillment of this agency's requirement for identification, evaluation and documentation of the potential architectural resources within the APE, the Army commissioned the *Architectural Survey and Evaluation of the Cantonment Area at the Pohakuloa Training Area (2002)*. A copy of this document is included for your review on a CD (Enclosure 2). The Army has coordinated this undertaking with the Advisory Council on Historic Preservation in regards to the applicability of the *Program Comment for Cold War Era Unaccompanied Personnel Housing, 1946-1974*. The Advisory Council has confirmed the applicability of the Program Comment for most of the buildings at PTA. According to the Program Comment, this agency's requirements under Section 106 and the National Historic Preservation Act have been fulfilled in regards to those buildings. A copy of the Program Comment is enclosed for your review (Enclosure 3). A few of the buildings at PTA are not covered under the Program Comment due to their use code distinctions. A list of those buildings is included for your review (Enclosure 4). The Army has determined that none of the buildings at PTA are eligible for inclusion on the National Register. The agency determination can be found in the 2015 addendum to the 2002 survey (Enclosure 5).

The Army intends to eventually demolish all the buildings within the APE and modernize the cantonment area. No definite plans have been adopted at this time.

The Army is asking for your concurrence with the determination of eligibility of the buildings at PTA. If you have any questions regarding this proposed undertaking, please contact Kenneth Hays at [Kenneth.w.hays2.civ@mail.mil](mailto:Kenneth.w.hays2.civ@mail.mil)

Sincerely,

A handwritten signature in black ink that reads "Stephen Dawson". The signature is written in a cursive, flowing style.

Stephen E. Dawson  
Colonel, US Army  
Commanding

Enclosures

---



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
KAKUHIHEWA BUILDING  
601 KAMOKILA BLVD, STE 555  
KAPOLEI, HAWAII 96707

SUZANNE D. CASE  
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KEKOA KALUHIWA  
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AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT

ENGINEERING  
LAND AND WILDLIFE  
HISTORIC PRESERVATION  
KAIKOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

July 19, 2016

Steven E. Dawson  
Colonel, US Army, Commanding  
Department of the Army  
US Army Installation Management Command, Pacific Region  
Headquarters, United States Army Garrison, Hawaii  
947 Wright Avenue Building 107, Wheeler Army Airfield  
Schofield Barracks, Hawaii 96857-5000

IN REPLY REFER TO:  
Log No. 2016.01481  
Doc. No. 1607MB03

Dear Colonel Dawson,

SUBJECT: National Historic Preservation Act (NHPA) Section 106  
Determination of Eligibility for Buildings at Pohakuloa Training Area (PTA)  
Agency: Department of the Army  
Location: Kaohe Ahupua'a, Hamakua Moku (District), Island of Hawai'i  
TMK: (3) 4-4-016:001

On June 21, 2016 the State Historic Preservation Division (SHPD) received a submittal from the Department of the Army (Army) for review under National Historic Preservation Act (NHPA) Section 106, requesting concurrence on a determination of eligibility (DOE) for the buildings located at the Pohakuloa Training Area (PTA). The submittal packet included a letter of correspondence, a map of the area, a 2002 architectural survey of the buildings at PTA, a 2015 addendum to the survey, a list of buildings at PTA, and a copy of the Advisory Council on Historic Preservation's (ACHP) Program Comment for Cold War Era Unaccompanied Personnel Housing (UPH) 1946-1974.

The letter states that the Army is consulting with the SHPD per NHPA Section 106 regarding the Army's future plans to demolish all buildings at PTA, and provides information regarding the buildings at PTA. It indicates that the 2002 Architectural Resources Survey identifies Buildings T-001, T-39, T-090, T-109, T-184, T-230, T-246, T-285, T-286, T-290, and T-293 as significant to the history of PTA; and that the 2015 addendum survey states that the Quonset huts have lost integrity because they were moved following WWII to PTA. Further, the letter states that the Army has determined that none of the buildings located at PTA are eligible for inclusion on the National Register of Historic Places (National Register) and that most of the buildings fall under the ACHP's Program Comment for Cold War Era Unaccompanied Personnel Housing.

The submittal documentation, however, does not adequately address why the buildings located at PTA are no longer significant and are not eligible for inclusion on the NRHP. Specifically, (1) moving of a property does not preclude its inclusion on the National Register; (2) the 2002 survey did not consider the possibility of the PTA being a significant and potentially eligible district, and did not evaluate the PTA as a district; (3) the 2015 addendum survey also did not evaluate the PTA as a district; and (4) the 2015 addendum survey states that each Quonset hut should be evaluated on a case by case basis, yet no documentation is provided indicating this was done.

Based on the above, the State Historic Preservation Officer (SHPO) **does not have sufficient information to concur with the Army's determination of eligibility for the buildings at PTA.** Additionally, there is conflicting information in the documentation sent with the submittal to justify this determination.

**SHPD requires the following information** to complete an NHPA Section 106 review of an undertaking:

1. Define the undertaking and scope of work involved including any ground disturbing activity;
2. Identify all historic properties within the APE including archaeological resources;
3. A list of NHOS and interested parties consulted;
4. A determination of effect for the undertaking; and
5. Minutes from consultation meetings held with NHOs and interested parties

Please note that the above items (1-5) do not represent a comprehensive list and may be supplemented with additional items.

**SHPD also requests the following** in order to complete the review of the Army's DOE for the buildings at PTA:

1. An evaluation of PTA as a district or historic landmark, providing sufficient documentation containing substantive information on the property, including a description, specific boundaries, its significance under National Register Criteria, and an explanation of why the property is eligible or not for listing in the National Register; and
2. SHPD staff site visit to PTA

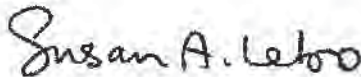
If SHPD and the Department of the Army do not concur on determination of eligibility, SHPD may ask that the Department of the Army submit the Determination of Eligibility to the Keeper of the National Register for a formal determination per 36 CFR §60.2.

The Department of the Army is the office of record for this consultation. Please maintain a copy of this letter for your records.

**SHPD looks forward** to receiving the additional information requested.

Please contact Susan A. Lebo, Archaeology Branch Chief, at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) for any questions regarding archaeological resources. Please contact Megan Borthwick, Architectural Historian, at (808) 692-8029 or at [Megan.Borthwick@hawaii.gov](mailto:Megan.Borthwick@hawaii.gov) for any questions regarding architectural resources or this letter.

Mahalo,



Signed For

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer

cc: Susan Tassaki ([susan.y.tassaki.civ@mail.mil](mailto:susan.y.tassaki.civ@mail.mil))  
Kenneth Hays ([kenneth.w.hays2.civ@mail.mil](mailto:kenneth.w.hays2.civ@mail.mil))  
Lisa Graham ([lisa.m.graham52.civ@mail.mil](mailto:lisa.m.graham52.civ@mail.mil))  
Rhonda Suzuki ([rhonda.suzuki.civ@mail.mil](mailto:rhonda.suzuki.civ@mail.mil))





REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
**U.S. ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION**  
**HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII**  
**745 WRIGHT AVENUE, BUILDING 107, WHEELER ARMY AIRFIELD**  
**SCHOFIELD BARRACKS, HAWAII 96857-5000**

**FEB 03 2017**

Office of the Garrison Commander

**SUBJECT: National Historic Preservation Act Section 106 consultation for Facility Improvement Program Buildings Replacement at the Pohakuloa Training Area; Hamakua District; TMK 04-04-16; Island of Hawai'i; State of Hawai'i**

Dr. Alan Downer  
Deputy State Historic Preservation Officer  
State Historic Preservation Division  
601 Kamokila Boulevard  
Kakuhihewa Building, Room 555  
Kapolei, Hawaii 96707

Dear Dr. Downer:

The United States Army Garrison, Hawaii (USAG-HI) requests the State Historic Preservation Officer's concurrence with the Army's determination that there is no eligible historic district at Pohakuloa Training Area (PTA) and no buildings are individually eligible. The USAG-HI also requests your concurrence with the Army's finding of No Historic Properties Affected by the proposed demolition and replacement of buildings associated with the PTA Facilities Improvement Program.

This letter is continuing consultation that began with the previous consultation letter sent on June 15, 2016 and your July 19, 2016 letter requesting additional information (see Enclosure B for previous correspondence). We are seeking to address the questions and information requests in your July 19, 2016 letter. The United States (U.S.) Army appreciates the time and effort you have put into this consultation through your correspondence with us, the on-site visit to PTA in September 2016, and the teleconferences on October 11 and 18, 2016.

The letter sent on June 15, 2016 included the U.S. Army's 2002 survey of buildings at PTA. This survey provided a discussion of the potential eligibility of any Quonset hut regardless of its location and the potential eligibility of the Quonset huts at PTA. The survey presented the possible arguments for and the possible arguments against eligibility, as these type of surveys routinely provide. This survey did not provide any definite conclusion or a final agency determination. The 2015 addendum provided the agency determination of all the buildings at PTA—that they are not eligible for the National Register.

The letter sent on July 19, 2016 stated that your office did not have enough information to concur or non-concur, and it listed five additional information



requirements and several information requests. Your particular requirements and requests are numbered and italicized within this letter with USAG-HI's responses immediately following each item.

***Requirement 1. Define the undertaking and the scope of work involved including any ground disturbing activity?***

This undertaking is the demolition and replacement of 126 buildings at PTA as part of the Facility Improvement Program. A majority of the buildings at the PTA have exceeded their maximum useful life. The most common structures at PTA are temporary-construction Quonset huts that were moved to Hawaii in the 1950s after being constructed most likely during WWII in other areas of the Pacific Region.

The undertaking involves replacement of the Quonset huts and other buildings with one-story concrete masonry unit (CMU) structures of similar height. Proposed replacement facilities are to be constructed within the general building footprints. Replacement approaches range from a "one for one" replacement where each Quonset hut (approx. 100 feet x 20 feet or 2,000 square feet each) is replaced with a CMU building of the same general size and capacity, to a larger scale of replacement in which five Quonset huts would be replaced with a larger CMU barracks building, with a similar number of beds (e.g., 10,000 square feet). The specific replacement ratio will depend on the types of funding available and the cost effectiveness of the solution.

The demolition of these buildings is part of the PTA Facilities Improvement Program which includes the upgrading of utilities as well. The utilities upgrades were addressed in a separate letter to your office on February 9, 2016 and your April 8<sup>th</sup> concurrence. This consultation covered any ground disturbing activity beyond the demolition of the buildings. For demolition of the buildings, the foundations of the existing buildings will be removed and the expected surface ground disturbance should only minimally exceed beyond the building footprints. As presented in the letter sent on February 9, 2016, no archaeological sites are expected to be encountered within the Area of Potential Effect (APE).

***Requirement 2. Identify all historic properties within the APE including archaeological resources?***

USAG-HI has identified no historic properties within the APE.

The APE was presented in the June 15<sup>th</sup> letter and it is approximately 563 acres. The APE for the eligibility determination was derived from the footprint where all the PTA buildings, including Quonset huts, rest. This includes the primary cantonment area of PTA and Bradshaw Army Airfield. The 2002 architectural survey included all of these buildings in both areas. The boundary was drawn to reflect the surveyed area. The APE for the current consultation also mirrors the previous February 9<sup>th</sup> consultation



regarding archeological resources at PTA. No archeological sites were found within the APE.

126 buildings within the APE are proposed to be replaced. Of those 126, 113 are close to or are older than 50 years, and of those, 79 buildings are addressed by the Program Comment that was discussed in the June 15, 2016 letter. Of the 126 buildings proposed to be replaced, only 34 require individual determinations of eligibility. None of these buildings were found to be individually eligible for the National Register nor do any of the 126 buildings contribute to a historic district.

***Requirement 3. A list of Native Hawaiian Organizations (NHOs) and interested parties consulted.***

Historically, NHOs have not shown interest in the buildings at PTA. The U.S. Army's February 9, 2016 letter discussing the potential for archeological sites within the APE was sent to 39 organizations including numerous NHOs, civic organizations, Office of Hawaiian Affairs, and Historic Hawaii Foundation. The U.S. Army's June 15, 2016 letter was sent to the same 39 organizations. Your office and Historic Hawaii Foundation were the only two organizations that responded with Historic Hawaii Foundation responding to only the second letter.

***Requirement 4. A determination of effect for the undertaking.***

This undertaking has the potential to affect historic properties, if they are present. The U.S. Army has determined that the 34 buildings are not eligible for inclusion in the National Register nor do any of the 126 buildings contribute to a historic district. As there are no historic properties within the APE, the U.S. Army has determined *No Historic Properties Affected* by this undertaking.

***Requirement 5. Minutes from consultation meeting held with NHOs and interested parties.***

From the two letters that were sent out to 39 organizations, only your office and Historic Hawaii Foundation responded. We have held two additional meetings with your office on this subject on October 11 and 18, 2016. There has not been a meeting with Historic Hawaii Foundation. The Historic Hawaii Foundation's letter was taken into consideration.

***Request 1. An evaluation of PTA as a district or historic landmark, providing sufficient documentation containing substantial information on the property, including description, specific boundaries, its significance under Nation Register Criteria, and an explanation of why the property is eligible or not for listing in the National Register.***

The U.S. Army evaluated the buildings at PTA by utilizing the standards set out in the National Register Bulletin titled "How to Apply the National Register Criteria for Evaluation" (NPS 2016). The U.S. Army drew its below conclusions from these standards. The U.S. Army is unable to evaluate the buildings as a National Historic Landmark as that is a specific National Park Service process and there is no evidence that these building have an associated historic significance that would elevate them to such a prestigious category of historic properties.

The survey of PTA provided a historic context analysis of the military history of the Island of Hawaii to ascertain PTA's position in the spectrum of potential significance. The analysis revealed that the Native Hawaiian military campaigns prior to first contact and the campaigns of King Kamehameha I during the wars of unification that led to the creation of the Hawaiian Kingdom, far outweighed all other military activities in terms of significance. The significance of the Native Hawaiian military history on the island, its effects on the state and even the future relationship with the United States cannot be overstated. PTA, however, has no significance compared to the remarkable events related to the Native Hawaiians' military history influence on the Island of Hawaii, the State of Hawaii or the nation.

The Quonset huts' role in World War II (WWII) was potentially significant. That setting and context (i.e. their historic integrity) vanished when they were gathered up from various locations across the Pacific and brought to Hawaii Island. Additionally, their placement at PTA during the Cold War begins a new context for these structures and thus the applicability of the Program Comment. For the 34 remaining buildings that may not be covered by the Program Comment, the discussion of their ineligibility as outlined in this letter applies to them. The historic context and potential significance of the individual buildings was submitted with the June 15, 2016 letter. The following breakdown addresses the additional request for further analysis of the potential for a historic district. The APE boundary is being used for the historic district analysis boundary as it encompasses the majority of buildings constructed or placed at PTA in the 1950s and 1960s.

A historic district eligibility cannot be separated from satisfying the National Register Criteria. A district may have contributing and non-contributing members, but the district must be made up of eligible resources that meet the criteria collectively or individually in an assemblage. The buildings and structures at PTA do not meet the eligibility criteria and thus no district can be derived.

A district must possess significant concentration, linkage, or continuity of buildings united historically by plan or physical development. A district must be an identifiable entity and significant. Districts that are significant will usually meet the last portion of Criterion C plus Criterion A, B, other portions of C, or D (NPS 2016), though to be eligible a district only needs to meet one criterion and have enough integrity to convey that significance. The Quonset huts at PTA have a new setting and context beginning



in the 1950s at this location. If the site is considered in a Cold War context, the huts and other buildings would have to merit significance in that period at their new location. From the U.S. Army's analysis in the 2015 addendum, there is no case for eligibility in the Cold War context at PTA. The PTA buildings do not meet any Criteria A, B, C, or D as explained below.

The PTA buildings do not meet Criterion A as they are not associated with events that have made a significant contribution to the broad patterns of our history. The Quonset huts at PTA were not in place during WWII. No significant events took place at PTA related to the Cold War (1946-1991). There were no battles, no significant events related to readiness for any engagement, no events that made any significant difference in the Cold War or any event that prevented any conflict. Only routine training occurred at PTA. According to the U.S. Army training specialists, the training that occurred at PTA was not different in that it was solely related to the Cold War. Soldiers received training as they would at any other training site in America. No important weapons were developed or used there that are related to the Cold War. No battle tactics were developed there related to the period. Soldiers did not live at PTA to have any Army traditions rooted in the site, unlike Schofield Barracks or other installations in Hawaii. The Soldiers only came over for short visits, returning to Oahu to live. There were no significant visits by any prominent persons from the period nor were any significant Cold War treaties signed at PTA.

The cantonment area and the training at PTA did not have any significant impact that would warrant a national level of significance. Also, the activities there did not stimulate economic growth of the island nor did it produce development that made significant impacts to local or state history. No town developed adjacent to PTA which is typical for other military installations. Saddle Road was constructed in WWII.

The PTA buildings do not meet Criterion B as they are not associated with the lives of persons significant in our past. There are no nationally significant persons related to the history of PTA. There are no records indicating that any significant person in American history visited; the PTA base was not designed by a prominent architect or designers. None of the base commanders of PTA went on to be nationally or locally significant persons. No persons significant to the history of the State of Hawaii or the Island of Hawaii are related to the APE at PTA.

The PTA buildings do not meet Criterion C as they do not embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction. Quonset huts were commissioned by and designed for the U.S. Navy. Quonset huts are an unique form of a building, but they are not representative of a significant and distinguishable entity. Many Quonset huts (not those at PTA) were turned into higher artistic forms after WWII, but none of the huts at PTA received this high artistic treatment.



The PTA buildings do not meet Criterion D as they have not have yielded and are not likely to yield, information important in history or prehistory. The eligibility of archeological properties or artifacts in the APE was addressed separately in a consultation letter dated February 9, 2016. This consultation is for the buildings and structures inside the APE at PTA exclusively. These buildings have no potential to yield information important in history or prehistory.

***Request 2. SHPD staff site visit to PTA***

The site visit was conducted on September 29, 2016.

***Request 3. Additional information on Criteria Consideration for Moved Buildings***

Lastly, your letter asked for additional clarity in reference to the criteria consideration for moved buildings. The National Register Bulletin states that location is the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved. The 2015 addendum to the survey pointed out that this was an issue in considering the eligibility of the Quonset huts at PTA. The National Register Bulletin provides no exceptions for Quonset huts.

The discussions in the application of criteria considerations of 'portable resources' exclude the Quonset huts at PTA from eligibility. For example, the original use and setting of the Quonset huts at PTA was an active war theatre in the western and northern Pacific; the existing historic context is/was for routine training after WWII concluded on the Island of Hawaii. Another example, in accordance with the National Register Bulletin, is that a small percentage of buildings in a historic district can be moved from their original location and the district will retain or achieve its eligibility. However, all the Quonset huts at PTA were moved to their current location in the 1950s.

The location issue cannot be dismissed in the discussion of the eligibility of these buildings. The National Register Bulletin also states that criteria considerations cannot be applied unless eligibility is already established by fulfilling the National Register criteria. The original 'setting' has been compromised. The buildings at PTA, including the Quonset huts, have been moved to create an 'artificially created grouping' and could lead to a false sense of history if they were looked at within a WWII perspective. The grouping of the huts is very unlike their original setting. Tropical models of the huts rest alongside arctic models at PTA, indicating that these huts were not in the same setting originally.

In summary, the Quonset huts at PTA are not considered significant in either the WWII context or the Cold War context. They are routine Base Operations facilities that were used during the Cold War era, but not directly associated with any significant Cold War theme.

The USAG-HI requests your concurrence with the U.S. Army's determination of eligibility to the National Register for 34 buildings and the U.S. Army's determination that there is no eligible historic district at PTA. The USAG-HI also requests your concurrence with the U.S. Army's finding of No Historic Properties Affected by the proposed demolition and replacement of buildings associated with the PTA Facilities Improvement Program. The U.S. Army asks for your office to provide us your perspective on eligibility in your response letter. If you have any questions, please contact Kenneth Hays Directorate of Public Works, Environmental Division, at 808-656-6790 or via e-mail at [kenneth.w.hays2.civ@mail.mil](mailto:kenneth.w.hays2.civ@mail.mil).

Sincerely,

A handwritten signature in black ink that reads "Stephen Dawson". The signature is written in a cursive, flowing style.

Stephen E. Dawson  
Colonel, U.S. Army  
Commanding

Enclosures



DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION  
KAKUINIHEWA BUILDING  
601 KAMOKILA BLVD, STE 555  
KAPOLEI, HAWAII 96707

SUZANNE D. TASK  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCES MANAGEMENT

KESKOA KALUHIWA  
FIRST DEPUTY

JEFFREY T. PEARSON  
DEPUTY DIRECTOR - WATER

JOSEPHINE K. KALUHIWA  
DEPUTY DIRECTOR - LAND AND OCEAN RESOURCES  
MILITARY RESOURCES  
COMMISSION ON WATER RESOURCES MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES INFORMATION

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAPOLANI ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

March 2, 2017

Colonel Stephen E. Dawson  
Department of the Army  
United States Army Garrison, Hawai'i  
745 Wright Avenue, Wheeler Army Airfield  
Schofield Barracks, Hawai'i 96857-5013

**IN REPLY REFER TO:  
LOG NO: 2017.00227  
DOC NO: 1703MB02  
Architecture**

Dear Colonel Dawson:

**SUBJECT: National Historic Preservation Act (NHPA) Section 106  
Request for Concurrence with Determination of Eligibility and with  
Determination for No Historic Properties Affected  
Department of the Army  
Kaohe Ahupua'a, Hamakua District, Island of Hawai'i  
TMK: (3) 4-4-016:001**

Thank you for the opportunity to comment on this request from the U.S. Army Garrison Hawai'i (USAG-HI) for the State Historic Preservation Officer's (SHPO) concurrence on the agency's determination of eligibility for the buildings at Pohakuloa Training Area (PTA) and the agency's determination of No Historic Properties Affected for the demolition and replacement of 126 buildings at PTA. This submittal provides additional information requested by SHPD in a letter dated July 19, 2016 (Log #2016.01481 Doc #1607MB03). The USAG-HI has determined the subject project to be an undertaking as defined in 36 CFR 800.16(y). The Area of Potential Effect (APE) is the cantonment area at PTA. SHPD received this submittal on February 8, 2017.

The submittal includes previous correspondence related to the undertaking, a map of the area of potential effect, a list of consulting parties invited to consult on the undertaking, a list of buildings located at PTA, and responses to SHPD's request for additional information. SHPD requested information about the undertaking, the identification of historic properties and evaluation of historic properties, the consulting parties and consultation meetings, determination of effect, and SHPD's request for a site visit in a letter dated July 19, 2016 (Log #2016.01481 Doc #1607MB03). A site visit was held on September 29, 2016, in which SHPD staff and the Department of the Army discussed the eligibility of the PTA buildings. Follow up meetings were held on October 11, 2016 and October 18, 2016.

Based on the site visit and information provided regarding the buildings at PTA, SHPD does not concur with The Department of the Army's determination of eligibility. It appears that the PTA cantonment area is a potential historic district, significant under criterion A for its association with the Military during the Cold War era. The design corresponds to the organization and training needs of the Army during the Cold War. The district retains its original design, association, setting, materials, location, feeling, and workmanship.

The SHPO does not concur with the determination of No Historic Properties because this undertaking would affect historic properties.

Colonel Dawson  
March 2, 2017  
Page 2

SHPO recommends seeking a formal determination of eligibility from the Keeper of the National Register of Historic Places per 36 CFR 63.2

Please maintain a copy of this letter with your environmental review record for this undertaking.

Please contact Megan Borthwick, Architectural Historian at [Megan.Borthwick@hawaii.gov](mailto:Megan.Borthwick@hawaii.gov) for any questions regarding architectural resources, and Susan Lebo, Archaeology Branch Chief, at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) for any questions regarding this letter or if there is a change in the APE or scope of work.

Mahalo,  
*Alan Downer*

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer

cc: Lisa Graham: [Lisa.m.Graham52.civ@mail.mil](mailto:Lisa.m.Graham52.civ@mail.mil)  
Sally Pfennig: [Sally.g.pfennig.civ@mail.mil](mailto:Sally.g.pfennig.civ@mail.mil)  
Rhonda Suzuki: [Rhonda.I.suzuki.civ@mail.mil](mailto:Rhonda.I.suzuki.civ@mail.mil)  
Katharine Kerr: [Kkerr@achp.gov](mailto:Kkerr@achp.gov)



DEPARTMENT OF THE ARMY  
HEADQUARTERS, UNITED STATES ARMY GARRISON  
PŌHAKULOA  
PO BOX 4607  
HILO, HAWAII 96720-0607

FEB 09 2016

REPLY TO  
ATTENTION OF

Office of the Commander

SUBJECT: National Historic Preservation Act Section 106 Compliance Regarding Pōhakuloa Training Area Cantonment and Bradshaw Army Airfield Facilities Improvement Plan, Ka'ōhe Ahupua'a, Hāmākua District, Hawai'i County, Hawai'i Island, Hawai'i TMK:[3] 4-4-016:006. Archeology.

Ms. Suzanne Case  
State Historic Preservation Officer  
State Historic Preservation Office  
Kakuhihewa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, HI 96707

Dear Ms. Case:

As Commander of the United States Army Garrison, Pōhakuloa (USAG-Pōhakuloa) I am writing to initiate consultation under Section 106 of the National Historic Preservation Act on a proposed undertaking for improvements to the Pōhakuloa Training Area (PTA) Cantonment and Bradshaw Army Airfield (BAAF) facilities at or below ground surface level. A facilities improvement plan, which is being incorporated into the Real Property Master Plan, has been promulgated for the improvement of the facilities at PTA and BAAF. The consulting parties listed at Enclosure 1 are simultaneously receiving a copy of this letter as part of the Section 106 consultation process, and their comment has been requested within thirty days of receipt of the letters.

I have determined that this project constitutes an undertaking as defined under 36 CFR Part 800.16(y). The undertaking consists of repair and improvement to the electrical system, communications systems, wastewater disposal system, storm water drainage, reconfiguration and installation of fence lines and surface grading for parking and other uses at PTA. A separate consultation will be conducted for modifications to the buildings at PTA that are proposed in the facilities improvement plan. This undertaking will bring the utilities and other facilities up to current standards and meet current and foreseeable needs. The utility improvements will all be external to the buildings and will enter the buildings through existing connections.

The projects will require excavation as well as surface grading and levelling. The area of potential effects (APE) consists of the PTA Cantonment, BAAF and the area between as depicted in the map at Enclosure 2. The undertaking will include excavations to install a modern wastewater system that meets current Environmental Protection Agency standards and requirements. The drainage system in the APE will be cleaned out and improved to prevent flooding of the buildings, which has been a chronic issue. Portions of the electrical and communications systems will be placed underground and upgraded to modern standards. The projects are in various stages of planning; Enclosure 3 illustrates the current engineering plans for the projects that have progressed to this point. Geotechnical testing and other



probing may be required in advance of the actual construction projects to inform final project design and planning.

Geologically most of the APE is classified as surficial deposits, alluvium and colluvium deposited by wind and water from the surrounding landscape and the slopes of Mauna Kea. This process has continued since the construction of the Cantonment and BAAF in the 1950s, resulting in buried building foundations that were at the surface level at the time of construction. The remainder of the APE is Laupahoehoe volcanics deposited 14000 to 65000 years ago by Mauna Kea eruptions. Pu'u Pōhakuloa on the northern boundary of the eastern portion of the APE is a scoria cone that derived from Mauna Kea eruptions between 14000 and 65000 years ago.

Portions of the APE have been the subject of archaeological surveys, as depicted by Enclosure 4. The APE has been modified by recent military activity associated with the air field and the Cantonment, as illustrated by the aerial photograph at Enclosure 5. Archeological monitoring has also been conducted for several projects within the APE. None of the archeological projects have identified any archeological deposits in the APE, or other archeological sites. Due to the random sampling of the APE by these projects and the consistency of soils across the area it is reasonable to conclude that the unsurveyed areas do not contain historic properties. Reports of the surveys and monitoring projects are included on the enclosed CD.

Based on previous archaeological surveys and the random sampling of the archaeological monitoring projects across the APE, I have determined that there will be no effects to historic properties as a result of this undertaking. Please respond within 30 days of receipt of this letter with concurrence or to request additional information. Should you require additional information about this project, the point of contact is Dr. Julie M. E. Taomia, USAG-P Archeologist, at telephone number (808) 969-1966 or by email at [julie.m.taomia.civ@mail.mil](mailto:julie.m.taomia.civ@mail.mil).

Sincerely,

  
Jacob A. Peterson  
Lieutenant Colonel, US Army  
Commanding

Enclosures



Ms. Suzanne Case  
State Historic Preservation Office

Mr. Kamuela Bannister  
Office of Hawaiian Affairs

Mr. Daniel Kawaiāea, Jr.  
Pu'ukohola Heiau National Historic Site

Ms. Cindy Orlando  
Hawai'i Volcanoes National Park

Ali'i 'Ai Moku Sir Joseph Spencer  
Royal Order of Kamehameha

Ali'i Sir Paul K. Neves  
Royal Order of Kamehameha I

Mr. E. Kalani Flores  
Flores-Case 'Ohana

Ms. Moani K. Akaka  
Aloha 'Aina Educational Center

Mr. Maūili Dickson  
Waimea Hawaiian Civic Club

Ali'i 'Ai Moku Ron Dela Cruz  
Royal Order of Kamehameha

Mr. Fred Cachola  
Royal Order of Kamehameha, Moku o Kohala

Mr. Haaheo Guanson  
Pacific Justice and Reconciliation Center

Mr. Craig V. Kahui  
La'i'ōpua 2020

'Ohana Kawainui  
c/o Aliikaua Kawainui Kaleikini

'Ohana Huihui  
c/o Mana Kaleilani Caceres

Dr. Kamana'opono Crabbe  
Office of Hawaiian Affairs

Mr. Shane Nelsen  
Office of Hawaiian Affairs

Ms. Geri Bell  
Hawaii Island District Council of Hawaiian Civic Clubs

Ali'i 'Ai Moku Pua Ishibashi  
Royal Order of Kamehameha

Ms. Stephanie Nagata  
Office of Mauna Kea Management

Ms. Kealoha Pisciotta  
Mauna Kea Anaina Hou

Mr. Edwin Miranda  
Hawai'i Island Burial Council

Mr. Rick Gmirkin  
Ala Kahakai National Historic Trail

Ms. Lisa Oshiro Suganuma  
Office of Native Hawaiian Relations

Ms. Annette Amaral  
Association of Hawaiian Civic Clubs

Ms. Kaleo Paik  
Aha Wahine

Ms. Taffi Wise  
Kanu o ka 'aina Learning 'Ohana

'Ohana Keliinoi  
c/o Kalahikiola Keliinoi

'Ohana Kaleikini  
c/o Kala Waahila Kaleikini

Mr. Melvin K. Soong  
The I'mua Group

Mr. Tom Lenchanko  
Aha kukaniloko koa mana mea ola kanaka mauili

Mr. Haaheo Guanson  
Native Hawaiian Church

Mr. JR Keoneakapu Williams  
'Ohana Kapu

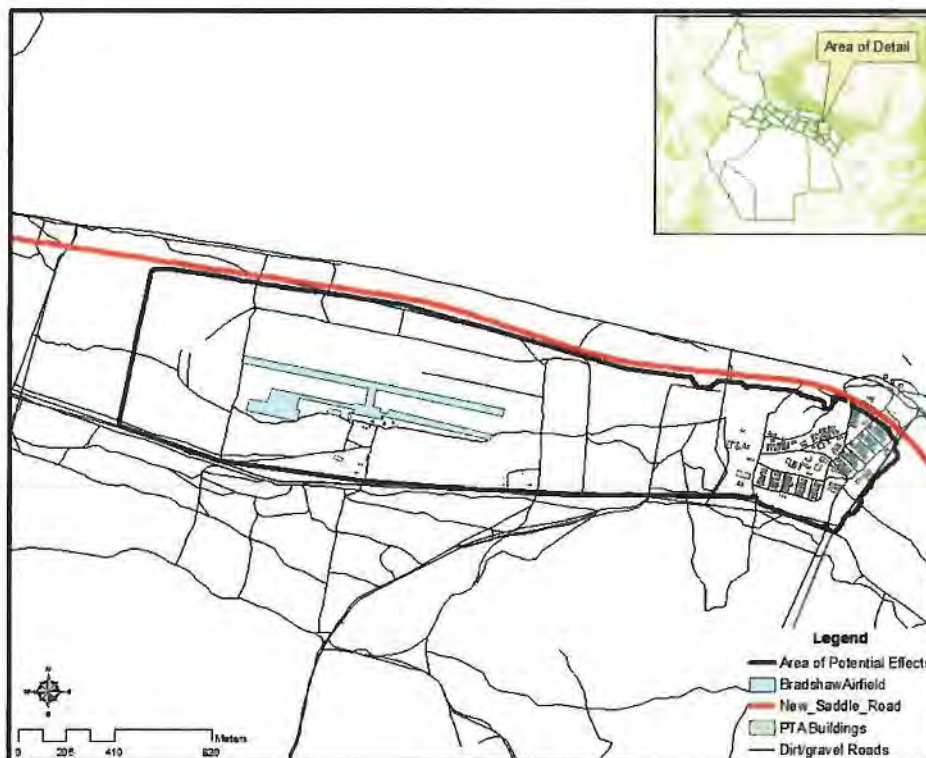
Superintendent, PWRO Honolulu  
National Park Service

Mr. William J. Aila, Jr.  
Hui Malama o Makua

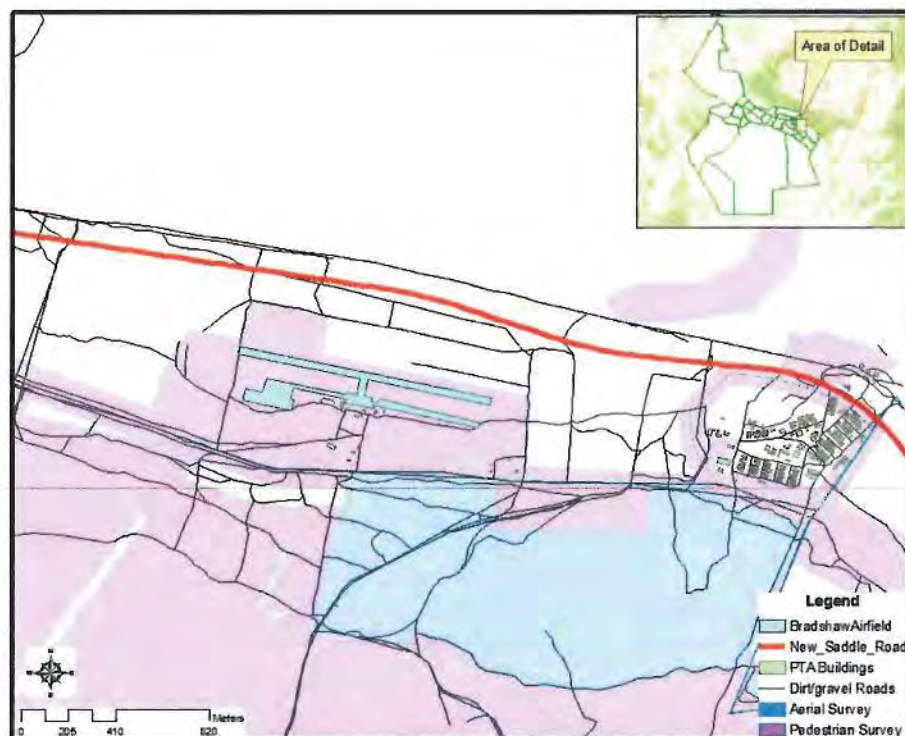
Ms. Paulette Ka'anohiokalani Kaleikini  
'Ohana Keaweamahi

Mr. James Medeiros  
'Ohana Medeiros

Ms. Kiersten Faulkner  
Historic Hawaii Foundation



Enclosure 2



Enclosure 4



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

NEKO KALUHIWA  
FIRST DEPUTY

JEFFREY T. PEARSON  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
(EMPLOYMENT)

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

March 11, 2016

Jacob A. Peterson  
Lieutenant Colonel, US Army Commanding  
Department of the Army  
Headquarters, United States Army Garrison, Pōhakuloa  
PO Box 4607  
Hilo, Hawaii 96720-0607

IN REPLY REFER TO:  
Log No. 2016.00343  
Doc. No. 1603SL07  
Archaeology, Architecture  
"more information requested"

Dear Lieutenant Colonel Peterson,

SUBJECT: National Historic Preservation Act (NHPA) Section 106 Review –  
Request for Concurrence of "No Historic Properties Affected"  
Pōhakuloa Training Area Cantonment and Bradshaw Army Airfield Improvement Plan  
Ka'ōhe Mauka Ahupua'a, Hāmākua District, Island of Hawai'i  
TMK: (3) 4-4-016:006

Thank you for the opportunity to comment on the request by the US Army Garrison, Pōhakuloa (USAG-PTA) for the State Historic Preservation Officer's (SHPO) concurrence of "no historic properties affected" for the proposed improvements to the Pōhakuloa Training Area (PTA) Cantonment and Bradshaw Army Airfield (BAAF) facilities. USAG-PTA has determined that this project is an undertaking as defined in 36 CFR 800.16(y) and as being subject to the National Historic Preservation Act of 1966, as amended. SHPD received this submittal request on February 12, 2016.

The undertaking involves repair and improvement to the electrical system, communication systems, wastewater disposal system, storm water drainage, reconfiguration and installation of fence lines and surface grading for parking other uses at PTA to bring the utilities and facilities up to current standards. Project work will include surface grading and leveling and subsurface excavation to install utility systems. The area of potential effect (APE) consists of the PTA Cantonment, the BAAF, and the intervening area. The APE is described geologically as surficial deposits, alluvium and colluvium, with the remainder consisting of Laupahoehoe volcanic deposits.

The submittal indicates that portions of the APE have been subjected to archaeological surveys and several archaeological monitoring projects; none yielded evidence of archaeological sites or deposits. Further, it is argued that based on this "random sampling" it is "reasonable to conclude that the unsurveyed areas do not contain historic properties."

Based on the information provided, the SHPO does not concur with USAG-PTA's determination of no historic properties affected as no information is provided regarding efforts to identify potential architectural historic properties within the APE.

The SHPO looks forward to receiving information on Section 110 or other surveys conducted within APE to identify architectural historic properties.

Lt. Col. Peterson  
March 11, 2016  
Page 2

The USAG-HI is the office of record for this undertaking. Please maintain a copy of this letter with you environmental review record for this undertaking. Please reference our project number in any communication with this office regarding this understanding.

Please contact Megan Borthwick at (808) 692-8029 or at [Mega.Borthwick@hawaii.gov](mailto:Mega.Borthwick@hawaii.gov) for any questions regarding architectural resources. Please contact Susan Lebo, Archaeology Branch Chief, at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) for any changes in the project APE or scope of work or questions or concerns regarding this letter.

Mahalo,

A handwritten signature in black ink, appearing to read "Alan S. Downer", followed by a long horizontal line extending to the right.

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer

cc: Dr. Julie M. Taomia, PTA Archaeologist ([Julie.m.taomia.civ@mail.mil](mailto:Julie.m.taomia.civ@mail.mil))



DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION  
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WATER AND OCEAN UTILIZATION  
BUREAU OF CONSERVANCIES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES (BIOLOGICAL)  
ENGINEERING  
FOREST AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

April 8, 2016

Jacob A. Peterson  
Lieutenant Colonel, US Army Commanding  
Department of the Army  
Headquarters, United States Army Garrison, Pōhakuloa  
PO Box 4607  
Hilo, Hawaii 96720-0607

IN REPLY REFER TO:  
Log No. 2016.00343  
Doc. No. 1603MB37  
Archaeology, Architecture  
"No Historic Properties Affected"

Dear Lieutenant Colonel Peterson,

**SUBJECT: National Historic Preservation Act (NHPA) Section 106 Review –  
Request for Concurrence of "No Historic Properties Affected"  
Pōhakuloa Training Area Cantonment and Bradshaw Army Airfield Improvement Plan  
Ka'ōhe Mauka Ahupua'a, Hāmākua District, Island of Hawai'i  
TMK: (3) 4-4-016:006**

Thank you for the opportunity to comment on the request by the U.S. Army Garrison, Pōhakuloa (USAG-PTA) for the State Historic Preservation Officer's (SHPO) concurrence of "no historic properties affected" for the proposed improvements to the Pōhakuloa Training Area (PTA) Cantonment and Bradshaw Army Airfield (BAAF) facilities. USAG-PTA has determined that this project is an undertaking as defined in 36 CFR 800.16(y) and as being subject to the National Historic Preservation Act (NHPA). SHPD received this submittal request on February 12, 2016. SHPD requested additional information in correspondence dated March 11, 2016 (Log No. 2016.00343, Doc. No. 1603SL07). The requested information was received via email on March 18, 2016.

The undertaking involves repair and improvement to the electrical system, communication systems, wastewater disposal system, storm water drainage, reconfiguration and installation of fence lines and surface grading for parking other uses. Project work will include surface grading and leveling and subsurface excavation to install utility systems.

The area of potential effect (APE) consists of the PTA Cantonment, the BAAF, and the intervening area. The submittal indicates that portions of the APE have been subjected to archaeological surveys and several archaeological monitoring projects; none yielded evidence of archaeological sites or deposits. Further, it is argued that based on this "random sampling" it is "reasonable to conclude that the non-surveyed areas do not contain historic properties."

The initial submittal did not include information regarding the efforts to identify potential architectural historic properties within the APE. Additional information was received by SHPD on March 18, 2016 which included the PTA architectural survey and APE maps indicating the location of architectural historic properties. The APE includes buildings which fall under the Unaccompanied Personnel Housing Program Comment, buildings less than 45 years in age, and unevaluated buildings. Based on the survey information provided, some of the buildings shown as unevaluated on the APE map may be eligible for listing on the National Register of Historic Places (NRHP). As described in the scope of work, the utility improvements will be external and will enter buildings through existing connections. Additionally, the NHPA Section 106 initiation letter states that modifications to the buildings will be part of another, separate Section 106 consultation.

Lt. Col. Peterson  
April 8, 2016  
Page 2

In accordance with 36 CFR part 800.4(d)(1) the historic properties within the APE will not be affected by this undertaking. Based on the materials provided for our review, the State Historic Preservation Officer (SHPO) **concurs** with the Department of the Army's determination of **no historic properties affected**.

The USAG-HI is the office of record for this undertaking. Please maintain a copy of this letter with your environmental review record for this undertaking. Please reference our project number in any communication with this office regarding this understanding.

Please contact Megan Borthwick at (808) 692-8029 or at [Megan.Borthwick@hawaii.gov](mailto:Megan.Borthwick@hawaii.gov) for any questions regarding architectural resources. Please contact Susan Lebo, Archaeology Branch Chief, at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) for any changes in the project APE or scope of work or questions or concerns regarding this letter.

Mahalo,

A handwritten signature in black ink, appearing to read "Alan S. Downer", followed by a long horizontal line extending to the right.

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer

cc: Dr. Julie M. Taomia, PTA Archaeologist ([Julie.m.taomia.civ@mail.mil](mailto:Julie.m.taomia.civ@mail.mil))

## ENCLOSURE 2

.....





REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
U.S. ARMY INSTALLATION MANAGEMENT COMMAND-PACIFIC  
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII  
745 WRIGHT AVENUE, BUILDING 107, WHEELER ARMY AIRFIELD  
SCHOFIELD BARRACKS, HAWAII 96857-6000

Office of the Garrison Commander

27 Jun 17

**SUBJECT: Eligibility Determination for 34 Buildings and a Historic District at the Pohakuloa Training Area; Hamakua District; TMK 04-04-16; Island of Hawai'i; State of Hawai'i**

Mr. J. Paul Loether  
Keeper of the National Register of Historic Places  
National Park Service  
1849 C Street, NW, Mail Stop 7228  
Washington, District of Columbia 20240

Dear Mr. Loether,

In accordance with the procedures outlined in 36 Code of Federal Regulation (CFR) 63.2(d) and with reference to 36 CFR 800.4(c)(2), the U.S. Army Garrison, Hawaii (USAG-HI) requests the Keeper of the National Register's opinion regarding the determinations of eligibility for 34 buildings located in the Pohakuloa Training Area (PTA) on the Island of Hawaii in the State of Hawaii (see enclosed table for complete listing of individual buildings). Additionally, the USAG-HI requests determination as to whether these 34 buildings plus 79 additional buildings addressed in the *Program Comment for Cold War Era Unaccompanied Personnel Housing 1946-1974* constitute a historic district eligible for the National Register of Historic Places (National Register).

The USAG-HI has determined that the 34 affected buildings are not individually eligible for the National Register and that there is no eligible historic district within the PTA cantonment (see USAG-HI letters dated June 15, 2016 and February 3, 2017). The Hawaii State Historic Preservation Division (SHPD) disagreed with these determinations in a letter dated March 2, 2017. In good faith, the Army consulted with SHPD on numerous occasions through letters, phone conversations, emails, meetings, and a site visit. The results of our 15 month extensive consultation was a stalemate. We seek your opinion as the USAG-HI and Hawaii SHPD have been unsuccessful in our attempts to resolve our disagreement.

These determinations are needed to support the consultation on the Facilities Improvement Program, sited within the cantonment of the Pohakuloa Training Area. This PTA Facilities Improvement Program also includes the upgrading of utilities. The utilities upgrades were addressed in a separate consultation that was completed on April 8, 2016.

The USAG-HI completed a survey of almost all the PTA buildings in 2002. This survey provided a discussion of the potential eligibility of any Quonset hut regardless of its location, including presenting the possible arguments for and against eligibility. The 2002 survey did not provide any definite conclusion or a final agency determination. The 2015 addendum provided the agency determination that the buildings are not eligible for the National Register. To note, the addendum specifically addressed eligibility of moved structures,



because at the time USAG-HI's understood the consulting parties' interest in the buildings was based on an association to the World War II. As the buildings were not at that location and many were likely not even within the State of Hawaii during WWII, we discussed the lack of eligibility due to being moved structures.

The Hawaii SHPD stated that the buildings are eligible as a historic district based upon local and state significance derived from association with Cold War training. However, the Army has discussed its determination against eligibility in the enclosed consultation letter (February 3, 2017 letter). Additionally, the Army would like to emphasize that training at PTA occurred before the Quonset huts were in place as PTA had been used for training purposes since the 1940s. The Quonset huts did not usher in a turning point in the military activities at the site; training occurred before and after the huts were there. The Quonset huts simply nullified the need to erect tents each time training occurred there.

The USAG-HI has been unable to link these buildings to any significant Cold War theme or event. According to the training specialists with the Army, the type of training that occurred at PTA was not specific to the Cold War. The same type of training with small adjustments is delivered there today well after the Cold War has ended.

Enclosed is supporting information for our determinations of eligibility, including detailed documentation of the buildings, descriptions of the proposed undertaking, and the correspondence regarding the disagreement as to the properties' eligibility for the National Register. If you have any questions, please contact Kenneth Hays, the USAG-HI Architectural Historian, at 808-656-6790 or via e-mail at [kenneth.w.hays2.civ@mail.mil](mailto:kenneth.w.hays2.civ@mail.mil). I am also providing a copy of this letter to Dr. Alan Downer, Deputy State Historic Preservation Officer.

Sincerely,



Stephen E. Dawson  
Colonel, U.S. Army  
Commanding

Enclosures

## **CONTENTS**

### **Determination of Eligibility Lists**

1. List of 34 buildings with individual determinations of eligibility.
2. List of 79 buildings addressed by the Program Comment.

### **Archeology-related Correspondence**

1. Letter of consultation to the Hawaii State Historic Preservation Division (SHPD) from the U.S. Army Garrison, Hawaii (USAG-HI) Commander regarding the determination of effect for the utility projects associated with the PTA Facility Improvement Program; dated February 2016.
2. Letter response from Hawaii SHPD to USAG-HI Commander regarding the determination of effect for the utility projects associated with the PTA Facility Improvement Program; dated 11 May 2016.
  - E-mail from USAG-Pohakuloa Archeologist, Dr. Julie Taomia, to Hawaii SHPD providing additional requested information; dated 18 March 2016.
  - E-mail attachment: Map of cantonment with affected buildings highlighted; sent 18 March 2016.
  - E-mail attachment: Map of airfield with affected buildings highlighted; sent 18 March 2016.
  - E-mail attachment: Table of affected buildings; sent 18 March 2016.
3. Letter of concurrence from Hawaii SHPD to USAG-HI Commander regarding the determination of effect for the utility projects associated with the PTA Facility Improvement Program; dated 8 April 2016.

### **Buildings-related Correspondence**

1. Letter of consultation to the Hawaii SHPD from the USAG-HI Commander regarding the determination of eligibility and effect for the demolition of buildings associated with the PTA Facility Improvement Program; dated 15 June 2016.
  - Enclosure 1 to 15 June 2016 Letter: Map of Area of Potential Effect.
  - Enclosure 2 to 15 June 2016 Letter: *Architectural Survey and Evaluation of the Cantonment Area at the Pohakuloa Training Area (2002)*.



- Enclosure 3 to 15 June 2016 Letter: *Program Comment for Cold War Era Unaccompanied Personnel Housing, 1946-1974.*
  - Enclosure 4 to 15 June 2016 Letter: List of affected buildings not covered by the Program Comment.
  - Enclosure 5 to 15 June 2016 Letter: 2015 Addendum to the 2002 survey (Agency determination).
2. Letter response from Hawaii SHPD to USAG-HI Commander regarding the determination of eligibility and effect for PTA buildings associated with the PTA FIP; SHPD request for additional information and clarification; dated 19 July 2016.
  3. Letter response from Historic Hawaii Foundation to USAG-HI Commander regarding the determination of eligibility and effect for PTA buildings associated with the PTA FIP; dated 5 July 2016.
  4. Letter of consultation to the Hawaii SHPD from the USAG-HI Commander regarding the National Register of Historic Places (NRHP) eligibility determination of PTA buildings and the determination of effect for the demolitions associated with the PTA FIP; USAG-HI provided additional requested information; dated 3 February 2017.
    - Enclosure 1 to 3 February 2017 Letter: List of Buildings.
    - Enclosure 2 to 3 February 2017 Letter: Previous Correspondence.
  5. Letter response from Hawaii SHPD to USAG-HI Commander regarding the eligibility determination for PTA buildings associated with the PTA FIP; SHPD disagreed with USAG-HI determination; dated 2 March 2017.
  6. Unsigned letter from the Hawaii SHPD to the USAG-HI stating additional information on the disagreement with the NRHP eligibility determinations made by USAG-HI.; undated; received on 25 April 2017.

#### **Additional Items**

1. List of applicable historic context information.
2. CD-ROM with electronic version of reports.



# United States Department of the Interior

NATIONAL PARK SERVICE

1849 C Street, N.W.  
Washington, DC 20240

## DETERMINATION OF ELIGIBILITY NOTIFICATION

National Register of Historic Places  
National Park Service

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**Name of Property:** Pohakuloa Training Area; Hamakua District

**Federal DOE Project:** Pohakuloa Training Area (PTA) Facilities Improvement Program

**Location:** Hawaii County Hawaii

**Request submitted  
by:** Col. Stephen E. Dawson, Department of the Army

**Date Received:** 7/7/2017

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| Building | Main Usage            | SHPO Opinion | SOI Opinion  |
|----------|-----------------------|--------------|--------------|
| 2        | VEH MAINT SHOP        | Not Eligible | Not Eligible |
| 3        | VEH MAINT SHOP        | Not Eligible | Not Eligible |
| 19       | RANGE MAINT           | Not Eligible | Not Eligible |
| 20       | RG SPT FAC/ELECTRIC   | Not Eligible | Not Eligible |
| 25       | VEH MAINT SHOP/OFFICE | Not Eligible | Not Eligible |
| 32       | ENG/HOUSING MAINT     | Not Eligible | Not Eligible |
| 33       | ENG/HOUSING MAINT     | Not Eligible | Not Eligible |
| 75       | CO HQ/ARMS STORAGE    | Not Eligible | Not Eligible |
| 82       | STORAGE               | Not Eligible | Not Eligible |
| 83       | ADMIN GEN PURP        | Not Eligible | Not Eligible |
| 84       | STORAGE               | Not Eligible | Not Eligible |
| 85       | COLD STORAGE          | Not Eligible | Not Eligible |



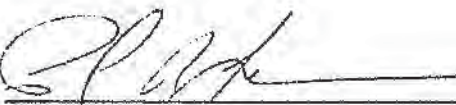
|     |                    |              |              |
|-----|--------------------|--------------|--------------|
| 87  | SEP TOIL/SHOWER    | Not Eligible | Not Eligible |
| 90  | CHAPEL             | Not Eligible | Not Eligible |
| 91  | AUDITORIUM/THEATRE | Not Eligible | Not Eligible |
| 93  | ENG/HOUSING MAINT  | Not Eligible | Not Eligible |
| 106 | BN HEADQUARTERS    | Not Eligible | Not Eligible |
| 108 | HEALTH CLINIC      | Not Eligible | Not Eligible |
| 109 | HEALTH CLINIC      | Not Eligible | Not Eligible |
| 110 | ADMIN GEN PURP     | Not Eligible | Not Eligible |
| 120 | CO HEADQUARTERS    | Not Eligible | Not Eligible |
| 129 | CO HEADQUARTERS    | Not Eligible | Not Eligible |
| 140 | CO HEADQUARTERS    | Not Eligible | Not Eligible |
| 141 | BN HEADQUARTERS    | Not Eligible | Not Eligible |
| 149 | CO HEADQUARTERS    | Not Eligible | Not Eligible |
| 179 | ADMIN GEN PURP     | Not Eligible | Not Eligible |
| 180 | ADMIN GEN PURP     | Not Eligible | Not Eligible |
| 184 | ORG STORGE         | Not Eligible | Not Eligible |
| 230 | CMTY/CONF CENTER   | Not Eligible | Not Eligible |
| 237 | CO HEADQUARTERS    | Not Eligible | Not Eligible |
| 250 | CO HEADQUARTERS    | Not Eligible | Not Eligible |
| 283 | ORG STORAGE        | Not Eligible | Not Eligible |
| 285 | POLICE/MP STATION  | Not Eligible | Not Eligible |
| 286 | POLICE/MP STATION  | Not Eligible | Not Eligible |

Pohakuloa Training Area Historic District

Eligible

Insufficient Information

(See attached Comments)



Keeper of the National Register

Date

08/17/2017



# DETERMINATION OF ELIGIBILITY NOTIFICATION

## National Register of Historic Places National Park Service

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**Name of Property:** Pohakuloa Training Area; Hamakua District

### NPS Review Comments

In accordance with the procedures outlined in 36 CFR 63 and 800.4, the United States Army Garrison, Hawaii provided documentation related to the National Register of Historic Places evaluation of 34 individual buildings located in the Pohakuloa Training Area (PTA) on the Island of Hawaii, Hawaii. In addition, a determination of eligibility was requested for a potential historic district comprised of those 34 buildings along with an additional 79 unaccompanied personnel housing units (UPH). These evaluations were made in association to the Facilities Improvement Program project at the cantonment area of the PTA.

The PTA represents a remote, live-fire Army training area on the Island of Hawaii. The buildings being evaluated represent the cantonment support area of the expansive training range and are largely comprised of World War II-era Quonset huts relocated to the installation between 1955 and 1961 to replace earlier temporary tent facilities.

The Secretary of the Interior has determined that the 34 buildings identified on the attached chart are not individually eligible for listing on the National Register. There is insufficient information at this time to definitively evaluate the National Register eligibility of the potential *Pohakuloa Training Area Historic District*.

In evaluating the PTA resources the Keeper agrees that the most appropriate context for understanding and considering these buildings is represented by the Cold War era. Although the Quonset hut buildings represent a property type initially developed for military use during World War II, the use of these specific buildings at the PTA site clearly post-dates the 1942-1945, WWII era. The use of the PTA during World War II was extremely limited and was not in any way directly associated with these buildings, nor do the buildings convey the activities or training conditions of that era at PTA. Rather, they represent the post-WWII re-adaptation of the training area to Cold War military uses and troop preparedness. As moved and relocated resources, the Quonset huts no longer convey their specific role in providing support to military activities during WWII. The buildings were never built or used at this location during the WWII war effort. Based on the diversity of building model variations seen at PTA their original locations may have been far afield from the PTA or even Hawaii. What the buildings represent is the historic adaptation of a distinctive property type valued for its flexibility in programming and expediency in construction. Offering an efficient alternative to more permanent construction, the abundant surplus Quonset huts provided DoD agencies with an effective way to expand the footprint of post-war installations, particularly in remote areas or where shelter was needed on a more transient basis rather than developing costly permanent installations.

With regard to the re-construction and re-use of the surplus Quonset huts at PTA in the Cold War era, the buildings represented utilitarian support facilities allowing more regular use of the training grounds by troops permanently stationed elsewhere in Hawaii. The Quonset huts served as an upgrade from temporary tent facilities to more protected shelter available for multiple uses and more extended stays. Nonetheless, the buildings were not directly associated with identified mission-critical Cold War era operations or activities (e.g. missile sites, bombers, radar operations, research and testing, weapons development, etc.). Rather they represented the common support buildings erected throughout the Department of Defense at military installations across the country and abroad (see Army Garrison-Red Cloud-Korea). These properties were not specially designed to meet a very precise military role, required no exceptional engineering or architectural development in order to bring them to fruition, and did not have a strong association with military strategic planning or response to the perceived Soviet/communist threat—as is more commonly associated with significant Cold War properties. The PTA itself, as characterized by the documentation provided to date, was of limited Cold War importance, ostensibly representing a basic remote training facility common to the military operations. The mere existence of an individual military installation building dating from the Cold War era is not sufficient grounds for eligibility.

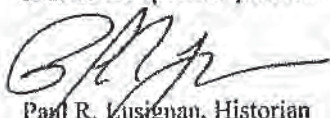


Utilitarian support buildings such as those at PTA were part of the common infrastructure of military installations providing basic shelter and administrative accommodations to a standard remote training area. None of the resources have been shown to be associated with significant mission critical aspects of Cold War activity. *As such the buildings at PTA do not appear to rise to the level of National Register significance under Criterion A in the context of the Cold War military history.*

*Likewise, none of the identified resources at PTA merits individual National Register eligibility under Criterion C as particularly unique or significant aspects of Cold War military design.* The Quonset huts represent basic utilitarian building forms, lacking individual merit. Following common post-WWII operational patterns, the military often re-used and re-purposed materials and installations to address evolving post-war requirements. Quonset huts provided an expedient and flexible way to meet those needs, particularly where permanent construction was unwarranted or difficult to obtain due to remote location, costs, or manpower. While visually distinctive, the Quonset huts represent the most functional and basic architectural level possible. They are often referred to as "utilitarian" and are typically constructed using expedient measures and materials such as prefabricated metal or light frame units. As a type these properties were constructed during the Cold War and supported the military, but were not direct responses to the Soviet aggression or Cold War mission critical operations. At the PTA Quonset huts were relocated and re-purposed during a broad stretch of time as local installation requirements changed, with some buildings not erected until after the 50-year mark. In addition many, if not most, of the PTA WWII-era huts appear to have been augmented with the application of exterior insulation and sealant during the 1980s, reflecting local adaptations to the common property type, but also calling into question their physical integrity as exemplary examples of the construction type. As with Criterion A, consideration of these buildings within the context of World War II history under Criterion C is not inappropriate. As WWII-era resources these buildings lack integrity of location, setting, feeling and association; design and materials may or may not be compromised depending on the specific reuse. Under the context of Cold War design, the documentation fails to establish how the resources represent particularly significant building designs or forms.

In reflecting on the potential National Register eligibility of the PTA resources as components of a cohesive *historic district*, in general the Keeper found a lack of compelling justification for significance under Criterion A, as outlined above. The general training mission of the PTA was a fairly common operational task, part of maintaining combat readiness rather than a mission-critical aspect of Cold War planning and operations. Similarly, the subject buildings merely represented the support facilities associated with the actual firing range/live-fire training components of the installation. While the buildings and site at PTA were operational during the Cold War, their contribution and relative significance within that context appears from the documentation provided to be limited at best. If there does exist an aspect of Cold War significance related to the extant resources at PTA it may be in the fact that the cohesive collection of re-purposed WWII-era Quonset huts *may represent* one of the largest extant districts of this distinctive building type remaining in the U.S. arsenal. Over 160,000 Quonset huts (numbers vary) were said to have been built by the 1950s for military purposes. The great majority of these were subsequently demolished, removed or altered from military bases in subsequent years—many seeing non-military reuse in the immediate post-war era and then subsequently being demolished. At this point there has been insufficient documentation provided assessing the relative scarcity or commonality of Quonset huts within the DoD. Is there information available regarding whether or not the cantonment at PTA represents the most intact cohesive collection remaining of re-purposed Quonset huts resources adapted by the military to meet local climactic, funding, and logistical constraints during the Cold War? While individual integrity as WWII-era resources has been compromised, as an illustration of general Cold War installation development, the PTA does appear to retain integrity of overall cantonment planning and military organization. Are there a number of other such installations extant in the Army? Is the PTA the only location in which one can see such large numbers of these distinctive building forms in situ with little to no change in cantonment plan and layout? I am aware of reports that Army Garrison-Red Cloud in South Korea at one point contained a significant number of such re-purposed Quonset huts, but do not have access to any additional reference information at this point. Does *Quonset Hut Survey* completed as a draft in February of 2003 under the Commander, Navy Region Hawaii provide any relevant information? The final evaluation of the PTA cantonment buildings as a historic district may rest on documentation of the site's relative status within the Army or DoD inventory with regard to Quonset hut use during the Cold War and the relative rarity as such set piece collections.

If there are specific questions regarding these comments and evaluations, please contact my office.



Paul R. Lusignan, Historian  
National Register of Historic Places, National Park Service  
203-354-2229 paul\_lusignan@nps.gov

8/17/2017  
Date





REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
U.S. ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC  
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII  
745 WRIGHT AVENUE, BUILDING 107, WHEELER ARMY AIRFIELD  
SCHOFIELD BARRACKS, HAWAII 96857-5000

**NOV 27 2017**

Office of the Garrison Commander

**SUBJECT:** Eligibility Determination for a Historic District at the Pohakuloa Training Area;  
Hamakua District; TMK 04-04-106:006; Island of Hawai'i; State of Hawai'i

Mr. J. Paul Loether  
Keeper of the National Register of Historic Places  
National Park Service  
1849 C Street, NW, Mail Stop 7228  
Washington, District of Columbia 20240

Dear Mr. Loether,

The U.S. Army Garrison, Hawaii (USAG-HI) received your response dated August 17, 2017 to our request for a determination of eligibility for a potential historic district at Pohakuloa Training Area (PTA) consisting of mainly re-purposed WWII-era Quonset huts. Our responses to the questions you posed in your letter are listed below.

***1. Is there information available regarding whether or not the cantonment at PTA represents the most intact cohesive collection remaining of re-purposed Quonset huts resources adapted by the military to meet local climactic, funding, and logistical constraints during the Cold War?***

Quonset huts are tracked by functional code within the Department of the Army's real property database. Since these structures served a variety of functions, a response to your question would require an Army wide data call, which is beyond the scope of this Section 106/110 eligibility determination. Similarly, we do not have access to information outside the purview of the Army, and therefore are unable to answer whether PTA's cantonment represents the most intact cohesive collection *re-purposed Quonset huts* in the military. However, anecdotally, we do know that there are a number of Quonset huts present on Marine Corps installations, for example, Camp Talega, CA has an intact Quonset complex and Quantico, VA has quite a number of Quonset huts. Additionally, there are a number of Quonset Huts remaining at Fort Ord, CA. What is unclear, is whether these buildings represent continuous use since WWII or were relocated to these installations and repurposed after the close of WWII.

As these particular PTA resources were not significant during the Cold War, the Army did not address the question of scarcity in our determination of eligibility.

***2. Are there a number of other such installations extant in the Army?***

Please see the answer to the above Question #1.



**3. Is the PTA the only location in which one can see such large numbers of these distinctive building forms in situ with little to no change in cantonment plan and layout?**

Please see the answer to the above Question #1.

**4. Does the Quonset Hut Survey completed as a draft in February of 2003 under the Commander, Navy Region Hawaii provide any relevant information?**

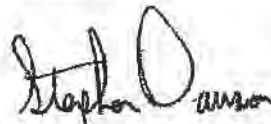
The report provides general information about Quonset huts in Hawaii. Much of the information focuses on Navy-managed buildings associated with World War II. The report does not help with respect to the circumstances at PTA, because of the focus on the WWII context that does not apply to the re-purposed buildings at PTA.

**5. Additional Information**

In addition to our responses to your questions, USAG-HI would like to offer the following information. The Department of Defense fully mitigated the effects of the Congressionally mandated demolition of WWII temporary buildings through a two-volume narrative, Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation, and a museum exhibit as stipulated in the 1986 WWII Programmatic Memorandum of Agreement (PMOA). Quonset huts were included in this mitigation and are covered by the PMOA. While there is some debate on whether the PMOA precludes future determinations of eligibility, Advisory Council on Historic Preservation has opined that no further Section 106 review is required in order to demolish resources covered by this agreement document. As these resources have already been mitigated as WWII temporary structures and were not directly associated with an identified mission-critical Cold War activity, the Army maintains that these resources lack significance to events that have made a significant contribution to the broad patterns of our history.

Thank you for your time and effort on this question of eligibility of a historic district at PTA. With receipt and review of this additional information, we ask for your determination of eligibility. If you have any questions, please contact Lisa Graham with USAG-HI Environmental Division at 808-656-3075 or via e-mail at [lisa.m.graham52.civ@mail.mil](mailto:lisa.m.graham52.civ@mail.mil). I am also providing a copy of this letter to Dr. Alan Downer, Deputy State Historic Preservation Officer.

Sincerely,



Stephen E. Dawson  
Colonel, U.S. Army  
Commanding



# United States Department of the Interior

NATIONAL PARK SERVICE

1849 C Street, N.W.

Washington, D.C. 20240

IN REPLY REFER TO:

## DETERMINATION OF ELIGIBILITY NOTIFICATION

National Register of Historic Places  
National Park Service

Name of Property: Pohakuloa Training Area Historic District

Federal DOE Project: PTA Facilities Improvement Program

Location: Hawaii County Hawaii

Request submitted by: DEPARTMENT OF THE ARMY

Date Received: 7/7/2017, Additional  
documentation received 12/4/2017

Opinion of the State Historic Preservation Officer: Eligible

### Comments:

Based on the Army's response to the National Register's August 17, 2017 return comments, the Secretary of the Interior has determined that the potential Pohakuloa Training Area historic district is not eligible for listing in the National Register. While clearly representing a sizable collection of re-purposed World War II-era Quonset Huts, the buildings remain minor support facilities with little direct association to the mission critical Cold War-era activities at the Pohakuloa training installation. Other examples of the property type exist elsewhere in the Department of Defense inventory, both in their original setting and re-purposed, and the DoD has effectively developed a programmatic memorandum of agreement regarding such temporary World War II buildings.

The Secretary of the Interior has determined that this property is:

☐ Eligible

☒ Not Eligible

Keeper of the National Register

1/18/2018

Date

**ENCLOSURE 3**

**SUBJECT:** National Historic Preservation Act Section 106 consultation for Facility Improvement Program at the Pohakuloa Training Area; Ka'ohē Ahupua'a, Hāmākua District, Island of Hawai'i [TMK: (3) 4-4-016:001], Architecture Review

**Distribution List**

|                                                                                                           |                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Mr. William J. Aila, Jr. Mrs. Melva N. Aila<br>Hui Mālama O Mākua                                         | Mr. Kamuela Bannister<br>Office of Hawaiian Affairs                                                       |
| Ms. Annelle Amaral<br>Association of Hawaiian Civic Clubs                                                 | Ku'auhau Mamo Jordan Hollister<br>Royal Order of Kamehameha<br>Moku 'O Kohala                             |
| Ms. Geri Bell<br>Hawai'i Council, Association of Hawaiian                                                 | Mr. E. Kalani Flores<br>Flores-Case 'Ohana                                                                |
| Mr. Norman Mana Kaleilani Cáceres<br>'Ohana Huihui                                                        | Dr. Ha'aheo Guanson<br>Pacific Justice and Reconciliation Center<br>Native Hawaiian Church                |
| Dr. Kamana'opono Crabbe<br>Office of Hawaiian Affairs<br>Attn: OHA Compliance Enforcement                 | Mr. Rick Gmirkin<br>Ala Kahakai National Historic Trail<br>National Park Service                          |
| Ms. Melia Lane-Kamahele<br>National Park Service<br>PWRO Honolulu                                         | Mr. Craig V. Kahui<br>La'i'Ōpua 2020                                                                      |
| Ms. Kiersten Faulkner<br>Historic Hawaii Foundation                                                       | Mr. Ali'ikaua Kaleikini<br>'Ohana Kawainui                                                                |
| Ali'i Sir Nathan Grace<br>Royal Order of Kamehameha I<br>Moku 'o Kōhala                                   | Mr. Daniel Kawaiaea, Jr.<br>Pu'ukohola Heiau National Historic Site<br>National Park Service              |
| Ali'i Sir David Heaukulani<br>Royal Order of Kamehameha I<br>Moku 'o Māmalahoa                            | Mr. Kalahikiola Keliinoi<br>'Ohana Keliinoi                                                               |
| Ms. Paulette Ka'anohiokalani Kaleikini<br>'Ohana Keaweamahi                                               | Mr. Tom Lenchanko<br>Kahuakai Ola Ko Laila Waha Olelo 'Aha<br>Kūkaniloko<br>Ko'a Mana Mea Ola Kanaka Maui |
| Mr. Kala Waahila Kaleikini<br>'Ohana Kaleikini                                                            | Ms. Stephanie Nagata<br>Office of Maunakea Management<br>University of Hawai'i at Hilo                    |
| Mr. James Medeiros<br>'Ohana Medeiros                                                                     | Ms. Cindy Orlando<br>Hawaii Volcanoes National Park                                                       |
| Mr. Edwin Miranda<br>Hawaii Island Burial Council<br>State Historic Preservation Division, Kona<br>Office | Ms. Kaleo Paik<br>Hoi Mai Ka Lei I Mamo<br>Aha Wahine                                                     |



ENCLOSURE 3

SUBJECT: National Historic Preservation Act Section 106 consultation for Facility Improvement Program at the Pohakuloa Training Area; Ka'ohe Ahupua'a, Hāmākua District, Island of Hawai'i [TMK: (3) 4-4-016:001], Architecture Review

|                                                                                                  |                                                               |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Mr. Shane Nelsen<br>Office of Hawaiian Affairs                                                   | Mr. Melvin K. Soong<br>The I'Mua Group                        |
| Ms. Lisa Oshiro-Suganuma<br>Office of Native Hawaiian Relations<br>US Department of the Interior | Ms. Taffi Wise<br>Kanu o Ka 'Aina Learning 'Ohana             |
| Ms. Kealoha Pisciotta<br>Mauna Kea Anaina Hou                                                    | Mr. JR Keoneakapu Williams<br>'Ohana Kapu                     |
|                                                                                                  | Ali'i 'Aimoku Sir Nainoa Perry<br>Royal Order of Kamehameha I |





## **APPENDIX B**

### **Section 7, Endangered Species Act Consultation**

- U.S. Department of the Interior Fish and Wildlife Service Letter to USAG-Pohakuloa, dated September 28, 2016. Subject: Informal Consultation for Pohakuloa Training Area Facilities Improvement Program
- USAG-Pohakuloa Letter to U.S. Fish and Wildlife Service, dated 29 August 2016
- USAG-Pohakuloa Letter to U.S. Fish and Wildlife Service, dated 27 June 2016



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, Hawaii 96850

In Reply Refer To:  
01EPIF00-2016-1-0504

SEP 28 2016

Lieutenant Colonel Christopher M. Marquez, USA  
Commander, U.S. Army Garrison-Pohakuloa  
Post Office Box 4607  
Hilo, Hawaii 96720

Subject: Informal Consultation for Pohakuloa Training Area Facilities Improvement  
Program, Hawaii

Dear Colonel Marquez:

The U.S. Fish and Wildlife Service (Service) received your letter on June 28, 2016, requesting our concurrence with your determination that a proposed Facilities Improvement Project (FIP) in the Base Camp of Pohakuloa Training Area (PTA) is not likely to adversely affect designated critical habitat or species listed or proposed for listing under the Endangered Species Act (ESA) of 1973 [16 U.S.C. 1531-1544 *et seq.*], as amended. These species include the endangered Hawaiian goose (*Branta sandvicensis*), Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma sandwichensis*), *Neraudia ovata*, *Silene lanceolata*, and *Solanum incompletum*, and the Band-rumped storm petrel (*Oceanodroma castro*) which is proposed for listing. An additional letter clarifying the effect of the project on Blackburn's sphinx moth (*Manduca blackburni*) on August 29, 2016 and phone conversations between U.S. Army Biologist Kapua Kawelo and Service Biologist Jon Sprague further enumerated the project description and possible effects on listed species.

The FIP involves repair or replacement of the Base Camp Quonset huts (prefabricated structures of corrugated steel with a semi-circular cross section) with concrete masonry unit structures of similar 1-story height and with the same floor area and footprint as the existing structures. Primary buildings that would be replaced include barracks, showers/latrines, and administration. Support facilities include dining facilities, clinic, chapel, gym, storage, maintenance, cold storage, theater, vehicle maintenance, and HAZMAT. There are 138 individual projects planned, including a combination of utilities repair and new facility replacement construction work. The FIP will be phased over a 10 year period beginning in 2016 and only a relatively small area of the Base Camp will be under construction at any given time. There is no barbed wire installation proposed as part of the project.

COPY

The status of listed species at PTA, and minimization measures limiting the impact of this project to them, are detailed below.

Hawaiian goose:

Hawaiian geese occasionally land in the vicinity of the PTA Base Camp during the summer flocking season (April-September), resting and loafing while in the area. There are potential effects to this species from elevated noise levels associated with FIP construction including increases in startle, alarm, and alert behavior, taking flight to avoid noise, increased energetic demands from flying, temporary masking of calls, and hearing damage. Additionally, vehicle strikes resulting from increased traffic could be a source of mortality. However, because only small areas will be affected by FIP activities at any one time and for limited duration, because geese are infrequent visitors to the Base Camp area to begin with, because the Base Camp area lacks features attractive to geese (e.g. lawns and standing water), and because of the enforcement of a low speed limit in the Base Area, the impact to Hawaiian geese is expected to be discountable.

*Minimization measures for Hawaiian geese:* Construction personnel will remain aware of the potential for geese presence and be vigilant in looking out for them during the project period. All Hawaiian goose sightings during the project period will be reported to the PTA Natural Resources Office. In the event that a Hawaiian goose is present in Base Camp during construction, a Natural Resources Office biologist will educate crews on how to work safely around the geese. All speed limits will be followed and enforced.

Hawaiian hoary bat:

Hawaiian hoary bats may visit Base Camp throughout the duration of the project to forage at night. Bats may be drawn to artificial light, in particular bright, unshielded, cool lights (more blue than yellow) through the attraction of insects which puts them at risk of colliding with construction equipment. Bats may also be affected by artificial noise at night which could interfere with the bat's echolocation. Bats roost in trees during the day, but the relative lack of roosting habitat in Base Camp makes their presence during the day unlikely.

*Minimization measures for Hawaiian hoary bat:* The Army will avoid tree trimming and removal during bat breeding season (June 1 - September 15). All construction activities will take place during the daytime. The Army will incorporate Uniform Facilities Criteria for Interior and Exterior Lighting Systems standards when replacing outside lights including using monochromatic amber LEDs and shielding. There is no barbed wire installation associated with this project.

Seabirds:

Hawaiian petrels and band-rumped storm petrels nest in underground burrows, cracks, and crevices around Hawaii Island, though there are no recorded burrows in the Base Camp area. However, seabird may be affected by artificial light associated with the project. Artificial lights, in particular bright, unshielded lights, may disorient seabirds transiting to and from their burrows, increasing energy expenditure and possibly leading to exhaustion, grounding (falling out), or collision with structures. To date there has been no recorded seabird groundings at PTA.

*Minimization measure for seabirds:* All construction activities will take place during the daytime, therefore use of lights at night will be avoided. The Army will incorporate Uniform Facilities Criteria for Interior and Exterior Lighting Systems standards when replacing outside lights including using monochromatic amber LEDs and shielding.

Listed plant species:

There are no naturally occurring listed plant species within the Base Camp area. However, there are several listed species out-planted in the interpretive garden that is managed by NRO staff including *Neraudia ovata*, *Silene lanceolata*, and *Solanum incompletum*. While the building adjacent to the garden is scheduled for demolition in FY2023, the garden itself will remain intact.

*Minimization measures for plants in the interpretive garden:* The Army will include dust, erosion, and sediment control measures, as well as preparation and implementation of a dirt and dust control plan to minimize the effect of construction activities on the garden. The physical structure of the garden will remain unchanged.

Based on the inclusion of the above avoidance and minimization measures as part of your project description, the Service concurs with your determination that this project may affect, but is not likely to adversely affect the Hawaiian goose, Hawaiian hoary bat, Hawaiian petrel, band-rumped storm petrel, *Neraudia ovata*, *Silene lanceolata*, or *Solanum incompletum*. Unless the project description changes, or new information reveals that the proposed project may affect listed species in a manner or to an extent not considered, or a new species is listed or critical habitat designated that may be affected by the proposed action, no further action pursuant to section 7 of the ESA is necessary.

Determination of “No Effect” for Blackburn’s sphinx moth (*Manduca blackburni*):

The Service acknowledges your no effect determination for Blackburn’s sphinx moth (BSM) made based on the fact that BSM has not been recorded in the PTA Base Camp area, is generally not observed above 5,000 feet altitude (PTA Base Camp is 6,300 feet), and your ongoing efforts with Hawaii Department of Transportation and the Big Island Invasive Species Committee to prevent spread of the non-native BSM host plant, tree tobacco (*Nicotiana glauca*), along the Daniel K. Inouye Highway and establishment on PTA property. If tree tobacco does move and become established in the Base Camp area during the term of this project, take of BSM may occur, and we recommend that you cease any activities that could disturb tree tobacco or the soil around them, and contact the Service for additional guidance.

Determination of “No effect” for Yellow-faced bees (*Hylaeus anthracinus*):

Initially, you requested the Service’s concurrence with a “may affect, not likely to adversely affect” determination for *Hylaeus anthracinus*, which is proposed for listing. However, after examination of the natural history of these bees in the Base Camp area, the distribution of host plants, and phone conversations between Kapua Kawelo and Jon Sprague, your effect determination was changed to “no effect”. The Service acknowledges this determination for *H. anthracinus* based on the fact that while there was a single record of *H. anthracinus* on PTA property in 2004, it was not in Base Camp, and there are no host plants in Base Camp that would attract them there. We encourage PTA to continue surveying its property for yellow-faced bee



species. If *H. anthracinus* or their hostplants become established in the Base Camp area, take of bees may occur and we recommend that you contact the Service for additional guidance.

Thank you for your efforts to conserve listed species and native habitats. Please contact Fish and Wildlife Biologist Jon Sprague (jonathan\_sprague@fws.gov or (406) 370-8045) if you have any questions or for further guidance.

Sincerely,

A handwritten signature in black ink, appearing to read "Michelle Bogardus", with a long horizontal flourish extending to the right.

Michelle Bogardus  
Island Team Leader  
Maui Nui and Hawaii Island



DEPARTMENT OF THE ARMY  
HEADQUARTERS,  
UNITED STATES ARMY GARRISON  
PŌHAKULOA  
PO BOX 4607  
HILO, HAWAII 96720-0607

IMHW-PTA-ZA

29 August 2016

Jon Sprague, Endangered Species Biologist - Maui Nui and Island  
U.S. Fish and Wildlife Service  
Pacific Islands Fish and Wildlife Office  
300 Ala Mona Boulevard, Room 3-122, Box 50088  
Honolulu, HI 96850

Re: Response to comments regarding the informal consultation and conference concurrence request for determining the Pōhakuloa Training Area Facilities Improvement Program is not likely to adversely affect the Hawaiian Goose, Hawaiian Hoary Bat, Hawaiian Petrel, federally-listed plant species, the Band-rumped Storm Petrel, Hawaiian Yellow-faced Bee, and candidate plant species;

Dear Mr. Sprague,

We received your comments via email (August 04, 2016) regarding the Army's request for concurrence regarding the not likely to adversely affect (NLAA) determination for the Pōhakuloa Training Area Facilities Improvement Program. This letter addresses the Service's comments and supplements the information provided in the Army's previous letter (June 27, 2016) regarding the project and potential effects to federally-listed species and species that are candidates for listing.

## **1.0 BLACKBURN'S SPHINX MOTH**

The Service requested that the Army analyze the potential effects of the action on the Blackburn's sphinx moth (*Manduca blackburni*). The documented distribution of the Blackburn's sphinx moth ranges between sea level and 5,000 feet elevation (US FWS 2005). The Pōhakuloa Training Area (PTA) Base Camp is located at 6,300 feet elevation, which is substantially higher than the documented distribution of Blackburn's sphinx moth. All activities associated with the Pōhakuloa Training Area Facilities Improvement Program will occur within the existing Base Camp footprint and outside the documented distribution of the moth.



The moth's non-native host plant, *Nicotiana glauca* (tree tobacco), is incipient and not well established on PTA. The PTA Natural Resources Office (NRO) staff actively controls *N. glauca*, in accordance with Service guidelines (2014 email from Tim Langer, US FWS Recovery Biologist, to Peter Peshut, PTA NRO Manager, unreferenced) and NRO standard operating procedures, to prevent encroachment and establishment on Army lands. In April 2016, PTA NRO team worked in cooperation with the Hawaii Department of Transportation and the Big Island Invasive Species Committee to control *N. glauca* along ~ 8 km of the Daniel K. Inouye Highway that traverses the Ke'āmuku Maneuver Area. The PTA NRO staff monitors the area and controls *N. glauca* as needed.

Therefore, the Army determines that the Pōhakuloa Training Area Facilities Improvement Program will have no effect on the Blackburn's sphinx moth.

## **2.0 HAWAIIAN PETREL AND BAND-RUMPED STORM PETREL**

The Service requested that the Army analyze the effects of installing permanent lights on replacement building on wildlife.

As noted in the previous letter, anthropogenic light sources are known to be hazardous to fledging petrels because they disrupt navigation (Simons and Hodges 1988). Petrel density in the saddle region flyway is estimated to be very low (Cooper et al. 1996) and very few petrels are expected to transit near Base Camp at night.

Permanent lights will be installed on the replacement buildings; however, overall lighting levels are not expected to change from existing conditions because of the project. Under the existing lighting design and levels, seabird fallout has not been documented at the PTA Base Camp. Light management is essential for many aspects of military training and lighting standards exist for the Department of Defense. The Uniform Facilities Criteria (UFC) for Interior and Exterior Lighting Systems and Control (DoD 2016) standards include establishing lighting zone levels compatible with the area's land use (e.g. low ambient lighting for personnel support districts) and installing shielding for exterior lights. For lighting source technology, the UFC states:

Use monochromatic amber LEDs in place of Low Pressure Sodium (LPS) for sensitive environments such as wildlife habitat, observations, wildlife nesting, or to meet dark sky requirements (observatories). Incorporate Fish and Wildlife, State, and local governing authority recommendations for lighting systems design and installation (page 101).

In addition, the Army will meet the requirements to maintain dark skies as described in the County of Hawai'i lighting ordinance (Hawai'i County, 1983).



## 2.1 Minimization Measures

The Army will incorporate lighting design features from the UFC for Exterior and Interior Lighting Systems and Control and the County of Hawai'i lighting ordinance. The Army will include reporting downed seabirds to the NRO as part of the required briefings provided to all military personnel training at PTA.

## 3.0 FINAL DETERMINATION

The Army concludes that potential direct and indirect effects resulting from the PTA Facilities Improvement Program are either insignificant or discountable and the Blackburn's sphinx moth will not be affected and the Hawaiian Petrel and Band-rumped Storm Petrel are not likely to be adversely affected. We request your concurrence with these determinations.

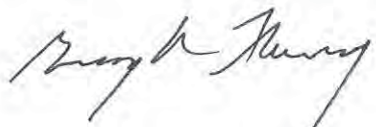
This assessment satisfies Army responsibilities under section 7(c) of the Endangered Species Act, unless:

- 1) The project description changes;
- 2) New information reveals that the proposed project may affect federally-listed or candidate listed species in a manner or to an extent not considered;
- 3) A new species or critical habitat is designated that may be affected by the proposed action.

The Army will be prepared to re-evaluate potential project impacts if necessary.

The point of contact regarding effects to federally-listed and candidate species from the Facilities Improvement Program is Ms. Kapua Kawelo, US Army Garrison, Hawaii Natural Resources Manager, 808-655-9189, [hilary.k.kawelo.civ@mail.mil](mailto:hilary.k.kawelo.civ@mail.mil). Alternatively, the point of contact at Pohakuloa Training Area is Mr. Greg Fleming, Deputy Garrison Commander, 808-969-2404, [gregory.r.fleming4.civ@mail.mil](mailto:gregory.r.fleming4.civ@mail.mil). I am also available at 808-969-2407, [christopher.m.marquez3.mil@mail.mil](mailto:christopher.m.marquez3.mil@mail.mil). Please do not hesitate to call Ms. Kawelo, Mr. Fleming, or me to discuss this matter further.

Sincerely,

  
CHRISTOPHER M. MARQUEZ  
Lieutenant Colonel, U.S. Army  
Commander, U.S. Army Garrison-  
Pōhakuloa



## REFERENCES

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[USAG-Pōhakuloa] United States Army Garrison – Pōhakuloa. 2016, June 27. Letter, Re: 1) Informal consultation concurrence request for determining the Pōhakuloa Training Area Facilities Improvement Program is not likely to adversely affect the Hawaiian Goose, Hawaiian Hoary Bat, Hawaiian Petrel, and federally-listed plant species; and 2) Informal conference concurrence request for determining the Pōhakuloa Training Area Facilities Improvement Program is not likely to adversely affect the Band-rumped Storm Petrel, Hawaiian Yellow-faced Bee, and candidate plant species. Hilo (HI): US Army Garrison Pōhakuloa. 12 p.

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DEPARTMENT OF THE ARMY  
HEADQUARTERS,  
UNITED STATES ARMY GARRISON  
PŌHAKULOA  
PO BOX 4607  
HILO, HAWAI'I 96720-0607

IMHW-PTA-ZA

27 June 2016

Jon Sprague, Endangered Species Biologist - Maui Nui and Hawai'i Island  
U.S. Fish and Wildlife Service  
Pacific Islands Fish and Wildlife Office  
300 Ala Mona Boulevard, Room 3-122, Box 50088  
Honolulu, HI 96850

- Re: 1) Informal consultation concurrence request for determining the Pōhakuloa Training Area Facilities Improvement Program is not likely to adversely affect the Hawaiian Goose, Hawaiian Hoary Bat, Hawaiian Petrel, and federally-listed plant species;
- 2) Informal conference concurrence request for determining the Pōhakuloa Training Area Facilities Improvement Program is not likely to adversely affect the Band-rumped Storm Petrel, Hawaiian Yellow-faced Bee, and candidate plant species;

Dear Mr. Sprague,

The U.S. Army Garrison – Pōhakuloa (Army) is requesting concurrence from the U.S. Fish and Wildlife Service (USFWS) that the proposed Pōhakuloa Training Area (PTA) Facilities Improvement Program, island of Hawaii, is **not likely to adversely affect** the endangered Hawaiian Goose (*Branta sandvicensis*), endangered Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), endangered Hawaiian Petrel (*Pterodroma sandwichensis*), candidate Band-rumped Storm Petrel (*Oceanodroma castro*), candidate Hawaiian Yellow-faced Bee (*Hylaeus anthracinus*), or any federally-listed and candidate plant species.

Note that the endangered Hawaiian Hawk (*Buteo solitarius*) is not part of this informal consultation. The Army received a **no effect** determination for this species for all military activities at PTA in the 2013 Biological Opinion issued by the USFWS. Therefore, any potential effects to the Hawaiian Hawk from Base Camp construction are covered under that previous consultation.

This letter summarizes potential effects to federally-listed and candidate species and proposes minimization measures to reduce potential effects from the proposed action.

## **1.0 PROJECT LOCATION AND DESCRIPTION**

PTA is a 132,000-acre multi-function training area located in the saddle region between Mauna Kea, Mauna Loa, and Hualālai volcanoes on the island of Hawai'i. In the north central portion on the island, the installation is situated 25 miles south of Waimea and 36 miles west of Hilo. The proposed action takes place within the 74-acre PTA Base Camp situated within a larger 758-acre cantonment area that also encompasses Bradshaw Army Airfield (Figure 1). The Base Camp was originally developed by the Army in the 1950s and has largely remained intact except for changes made in the late 1990s to accommodate the realignment of Saddle Road (a.k.a. Daniel K. Inouye Highway) and several new buildings constructed in the early 2000s.

The Army is proposing to modernize building and utility infrastructure at the existing PTA Base Camp to meet current building codes and to improve safety and quality of life of military and civilian personnel stationed and training there. Modernization (i.e., Facilities Improvement Program) will be achieved through replacement and conversion of existing facilities. The proposed action will improve the quality of the facilities within the Base Camp without increasing the capacity or extending beyond existing boundaries. The end-state will continue to provide housing and training space for a Brigade element, similar to what is currently provided.

The proposed action involves the installation of new underground utilities and surface drainage features and the 1-to-1 or 1-to-5 replacement of buildings present in the Base Camp. The existing pattern of the Base Camp street network will remain unchanged as will the general density and basic land use configuration. Site preparation work would include localized grubbing, trenching, and grading within the Base Camp.

### **1.1 Quonset Hut Replacements**

The proposed action involves repair and/or replacement of the Base Camp Quonset huts (prefabricated structures of corrugated steel with a semi-circular cross section) with concrete masonry unit structures of similar 1-story height and with the same floor area and footprint as the existing structures. Primary building uses that would be replaced include barracks, showers/latrines, and administration. Support facility types also include dining facilities, clinic, chapel, gym, storage, maintenance, cold storage, theater, vehicle maintenance, and HAZMAT.

There are 138 projects planned, including a combination of utilities repair and new facility replacement construction work. Facility repair is to be achieved with in-house labor, labor augmentation, troop construction, as well as possible nontraditional federal military construction options.

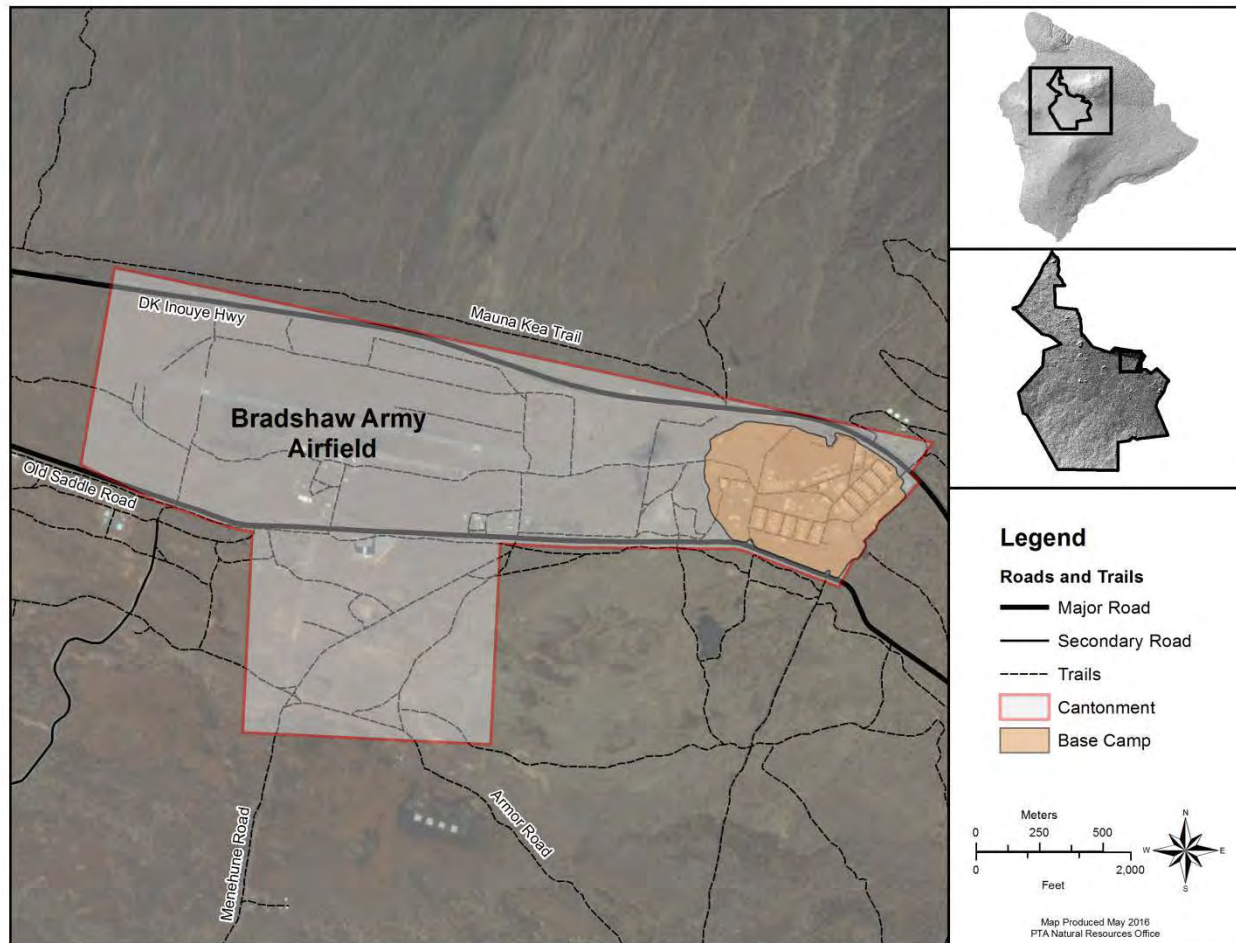


Figure 1. Location of the Pōhakuloa Training Area Base Camp area

## 1.2 Utility Improvements

Proposed utility improvements in the Base Camp include:

- Individual wastewater collection systems
- Electrical, primary/secondary power distribution system
- Storm drainage system
- Telecommunications lines underground
- Grading

The Hawai'i State Department of Health has approved the proposed waste water system concept design at PTA. The other utility systems are in the concept phase but generally follow existing roads and corridors. Improved utilities would increase system reliability. Burying utilities would reduce exposure to the harsh elements at PTA and should reduce ongoing maintenance requirements.

### **1.3 Best Management Practices**

Best management practices will be implemented during construction to avoid or minimize adverse impacts to the environment. Typical practices that may benefit federally-listed and candidate species will include:

- Erosion and sediment control measures such as protection of erodible soils, mechanical control of stormwater runoff from the construction site, use of sediment basins, and use of vegetation and mulch on soil exposed by grading.
- Implementation of fugitive dust control measures during the construction period, including during non-working periods. Measures may include sprinkling or treating with dust suppressants the soil at the site, haul roads, and other areas disturbed by operations.
- Preparation and implementation of a dirt and dust control plan that identifies the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.
- Cleaning and inspecting all construction vehicles and equipment before moving onto the worksite to prevent the spread of invasive species. Prior to construction, the PTA Natural Resources Office will provide briefing materials to ensure inspections are conducted effectively.

### **1.4 Phasing**

The proposed action will be phased over a 10 year period beginning in FY 2016. Phasing will be according to geographically designated neighborhoods, or blocks, in the Base Camp. The first several phases involve design and construction of new utilities with the first “neighborhood” reconstruction project scheduled for FY 2019 near the Main Entrance Gate and progressing in a clockwise direction towards the southwest quadrant of the Base Camp. Priority projects include electrical distribution upgrades, new dining facilities, shower points, and barracks.

## **2.0 HAWAIIAN GOOSE**

### **2.1 Potential Direct and Indirect Effects**

#### **Noise**

The Hawaiian Goose occasionally lands in the vicinity of the PTA Base Camp during summer flocking season (April-September), and geese appear to rest and loaf while in the area. Potential effects to this species from elevated noise levels associated with Base Camp construction include increases in startle, alarm, and alert behavior, taking

flight to avoid noise, increased energetic demands from flying, temporary masking of calls, and hearing damage. However, these effects are deemed insignificant because only small areas will be affected at one time and for limited duration. Geese are expected to vacate areas when noise generated from construction activities exceeds comfort levels. Additionally, studies demonstrate that various bird species co-exist with or habituate to loud noises (USAG-HI 2010; Peshut and Schnell 2011).

### ***Injury and/or Mortality***

Increased vehicle traffic in the vicinity of PTA Base Camp during construction activities could result in Hawaiian Goose mortality due to vehicle collisions. Vehicle strikes can be considered a major source of geese mortality, especially where there is increased human activity near areas that attract geese, such as golf courses, national parks, and manicured lawns on roadsides. In addition, the low flight path of Hawaiian Geese when landing and taking off increases the possibility for vehicle collisions. However, the possibility of Hawaiian Goose vehicle strikes or collisions is considered extremely unlikely in PTA Base Camp because of the lack of manicured lawns and other geese attractants as well as the low speed limit (15 mph).

## **2.2 Minimization Measures**

Visitation to PTA Base Camp is infrequent, but the Hawaiian Goose has been observed in the area before. Although effects to this species from Base Camp construction are considered to be unlikely, construction personnel will remain aware of the potential for geese presence and be vigilant in looking out for them during the project period. All Hawaiian Goose sightings during the project period will be reported to the PTA Natural Resources Office. In the event that the Hawaiian Goose is present in Base Camp during construction, a Natural Resources Office biologist will educate crews on how to work safely around the geese. All speed limits will be followed and enforced.

## **3.0 HAWAIIAN HOARY BAT**

### **3.1 Potential Direct and Indirect Effects**

#### ***Noise***

Potential effects to the Hawaiian Hoary Bat from elevated noise levels associated with PTA Base Camp construction include potential hearing damage, collision with equipment, and/or startling of individuals from roosts, which may disrupt sleep patterns or torpor. Base Camp does not provide suitable roosting habitat for bats, but there is potential available foraging habitat in the area. A review of scientific literature suggests that some bat species avoid foraging in noisy areas (Peshut et al. 2013). Direct effects to



foraging bats from noise generated by Base Camp construction are therefore unlikely. Additionally, since construction will only take place during the daytime noise will not interfere with echolocation. Therefore, collisions with equipment are not considered to be a concern for the Hawaiian Hoary Bat. It is assumed that if noise levels associated with Base Camp construction are intolerable, bats will avoid or vacate the area.

It should be noted that bats near Base Camp are already exposed to noise from Daniel K. Inouye Highway, commercial helicopter overflights, and routine military training exercises. Existing noise levels in the area are relatively constant and are not expected to substantially change due to noise generated from Base Camp construction. Noise levels are expected to remain below the threshold of concern for most wildlife species.

### ***Anthropogenic Light***

Hawaiian Hoary Bats may be attracted to lights due to increased insect presence. A potential effect to bats from anthropogenic light generated during Base Camp construction is collision with equipment and temporary structures. However, no nighttime construction activities are planned. Therefore effects to the Hawaiian Hoary Bat from anthropogenic lights are not expected. Additionally, no bat collisions have been reported in the Base Camp area.

### ***Habitat Disturbance***

Given the lack of preferred roosting habitat at the PTA Base Camp, daytime presence of roosting bats is considered to be improbable, but it is possible that foraging bats transit across the area during nighttime hours. Base Camp construction could affect the Hawaiian Hoary Bat by disturbing potential foraging habitat. However, the 2003 Biological Opinion (USFWS 2003) states that the loss of foraging habitat is not considered to be the major limiting factor for the Hawaiian Hoary Bat at PTA. Base Camp constitutes an insignificant percentage of the total available foraging habitat at PTA. Therefore, effects to bat foraging habitat from Base Camp construction are considered negligible.

## **3.2 Minimization Measures**

Although effects to the Hawaiian Hoary Bat from Base Camp construction are considered to be unlikely, to minimize any potential impacts of the action the Army will avoid tree trimming/removal during bat breeding season (June 1 - September 15). All observations of downed bats during the project period will be reported to the PTA Natural Resources Office.

## **4.0 HAWAIIAN PETREL AND BAND-RUMPED STORM PETREL**

### **4.1 Potential Direct and Indirect Effects**

#### ***Injury and/or Mortality***

Potential effects to petrels from PTA Base Camp construction include injury and/or mortality during demolition and construction activities as well as disturbance of existing nests or incubating adults. However, petrel colonies typically exist on rough, inaccessible terrain such as steep heavily-vegetated cliffs and high-elevation barren lava flows, where predation pressure is presumably relaxed. Nests are located in burrows, crevices, or cracks in lava tubes (Banko 1980). Base Camp does not contain suitable habitat for the Hawaiian Petrel or Band-rumped Storm Petrel. Therefore no injury, mortality, or disturbance to petrels or petrel nests is expected from construction activities.

#### ***Anthropogenic Lights***

Anthropogenic light sources are known to be hazardous to fledging petrels because they disrupt navigation (Simons and Hodges 1988). The rare petrel that traverses PTA Base Camp may become disoriented and grounded from lights associated with construction activities. However, no nighttime construction activities are planned and effects to the Hawaiian Petrel and Band-rumped Storm Petrel from anthropogenic lights are not expected. Additionally, petrel density in the saddle region flyway is estimated to be very low (Cooper et al. 1996) and very few petrels are expected to transit near Base Camp at night.

### **4.2 Minimization Measures**

Although effects to the Hawaiian Petrel and Band-rumped Storm Petrel are considered to be unlikely, to minimize any potential impacts from the action on transiting petrels all construction activities will take place during the daytime. All observations of downed petrels during the project period will be reported to the PTA Natural Resources Office.

## **5.0 HAWAIIAN YELLOW-FACED BEE**

### **5.1 Potential Direct and Indirect Effects**

There is only a single montane record on Hawai'i Island of this otherwise coastal species (Magnacca 2007b). A *Hylaeus anthracinus* individual was collected at PTA in 2004, possibly a vagrant (USFWS 2013, 2015). The precise locality is not known, but it was found resting in a fruit capsule of the endangered *Kadua coriacea*, which typically occurs in open *Metrosideros* treeland, a generally poor habitat for *Hylaeus* (Magnacca and King 2013). While some other typical coastal species occur in the broader area, namely

*Hylaeus flavipes* and *Hylaeus ombrias*, no additional *H. anthracinus* specimens have been found, and it is questionable whether a permanent breeding population exists at the installation (Magnacca and King 2013).

### ***Injury/Mortality and Habitat Disturbance***

If present in the Base Camp area during construction, *H. anthracinus* individuals may be injured or killed if native plants are removed or destroyed during demolition and construction activities. However, the presence of *H. anthracinus* in the PTA Base Camp is "extremely unlikely to impossible" because the area does not contain suitable habitat for this species (Magnacca pers. comm. 2016). All Hawaiian *Hylaeus* species strongly depend on intact communities of native vegetation for food and nesting habitat (Magnacca 2007a). There are no intact communities of native plant species found in Base Camp and non-native plant species are sparsely distributed. Daly and Magnacca (2003) have found that it is rare for *Hylaeus* species to visit non-native plants and they are almost never found in habitats dominated by non-native plant species.

Other rare and common *Hylaeus* species are known to occur in the area, but as previously mentioned *H. anthracinus* presence at the installation has not been confirmed. Additionally, Magnacca and King (2013) assessed the presence and distribution of Yellow-faced Bees on Hawai'i Island and no *H. anthracinus* were observed at PTA. All of the sites where this species was found consisted of rocky shoreline with either landscaped or alien vegetation and/or bare rock inland (Magnacca and King 2013). Therefore no injury, mortality, or disturbance to *H. anthracinus* is expected from demolition and construction activities.

It is also possible that *H. anthracinus* could transit or be blown across the action area. However, given the limited distribution of non-native plants and the presence of man-made structures in Base Camp, the number of transiting individuals is expected to be extremely low to nonexistent.

## **5.2 Minimization Measures**

No *H. anthracinus* are expected to be present in the PTA Base Camp area, therefore no minimization measures are proposed for this species.

## **6.0 FEDERALLY-LISTED AND CANDIDATE PLANT SPECIES**

### **6.1 Potential Direct and Indirect Effects**

No naturally occurring federally-listed or candidate plant species are known to exist in PTA Base Camp. The PTA Interpretive Garden occasionally contains outplanted

federally-listed and candidate plant species. Although the building adjacent to the garden (T-93) is scheduled for demolition in FY 2023, the garden itself will remain intact and measures will be taken to avoid or minimize impacts to any federally-listed and candidate plants that may be present.

Federally-listed and candidate plant species are also propagated within the Rare Plant Propagation Facility, but the facility was newly constructed in FY 2016 and is not slated for demolition. The facility and the plants within it are managed by the PTA Natural Resources Office and are not part of the proposed action. Therefore, effects to federally-listed and candidate plant species from Base Camp construction are not expected.

## **6.2 Minimization Measures**

Although effects to federally-listed and candidate plant species from Base Camp construction are unlikely, the Army will implement best management practices during demolition and construction activities to avoid or minimize adverse effects from the action. Best management practices will include dust, erosion and sediment control measures as well as preparation and implementation of a dirt and dust control plan. The physical structure of the PTA Interpretive Garden will remain unchanged.

## **7.0 FINAL DETERMINATION**

The Army concludes that potential direct and indirect effects resulting from the PTA Facilities Improvement Program are either insignificant or discountable and the Hawaiian Goose, Hawaiian Hoary Bat, Hawaiian Petrel, Band-rumped Storm Petrel, Hawaiian Yellow-faced Bee, federally-listed and candidate plant species are not likely to be adversely affected. We request your concurrence with these determinations.

This assessment satisfies Army responsibilities under section 7(c) of the Endangered Species Act, unless:

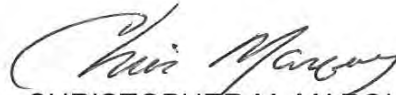
- 1) The project description changes;
- 2) New information reveals that the proposed project may affect federally-listed or candidate listed species in a manner or to an extent not considered;
- 3) A new species or critical habitat is designated that may be affected by the proposed action.

The Army will be prepared to re-evaluate potential project impacts if necessary.

Due to the current absence of a Department of the Army civilian employee in the PTA Natural Resources Office, the point of contact regarding effects to federally-listed and

candidate species from the Facilities Improvement Program is Ms. Kapua Kawelo, US Army Garrison, Hawaii Natural Resources Manager, 808-655-9189, [hilary.k.kawelo.civ@mail.mil](mailto:hilary.k.kawelo.civ@mail.mil). Alternatively, the point of contact at Pohakuloa Training Area is Mr. Greg Fleming, Deputy Garrison Commander, 808-969-2404, [gregory.r.fleming4.civ@mail.mil](mailto:gregory.r.fleming4.civ@mail.mil). I am also available at 808-969-2407, [christopher.m.marquez3.mil@mail.mil](mailto:christopher.m.marquez3.mil@mail.mil). Please do not hesitate to call Ms. Kawelo, Mr. Fleming, or me to discuss this matter further.

Sincerely,



CHRISTOPHER M. MARQUEZ

Lieutenant Colonel, U.S. Army

Commander, U.S. Army Garrison-Pōhakuloa



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## **APPENDIX C**

### **Coastal Zone Management Act Consultation**

- Department of the Army USAG-HI Negative Determination Letter to State of Hawai'i Office of Planning (no date), sent February 27, 2018



REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII  
DIRECTORATE OF PUBLIC WORKS  
947 WRIGHT AVENUE, WHEELER ARMY AIRFIELD  
SCHOFIELD BARRACKS, HAWAII 96857-5013

Directorate of Public Works

SUBJECT: Coastal Zone Management Act (CZMA) Negative Determination Letter at the Pohakuloa Training Area (PTA); Hamakua District; TMK 04-04-16; Island of Hawaii; State of Hawaii

Mr. Leo R. Asuncion  
Office of Planning, State of Hawaii  
Coastal Zone Management Program  
P.O. Box 2359  
Honolulu, Hawaii 96804

Dear Mr. Asuncion:

In accordance with the Federal Coastal Zone Management Act of 1972 (CZMA) as amended, Section 307c(1), the Department of Army (Army) has determined that the construction and use of the PTA Facility Improvement projects will not affect the coastal uses or resources and therefore, does not require a consistency determination.

PTA is a 130,000-acre training facility controlled by the United States Army, which includes an airfield, cantonment, and live-fire ranges. The United States Army Garrison-Hawaii (USAG-HI) proposes to modernize buildings and utility infrastructure at the existing cantonment to meet current building codes and to improve safety and quality of life of Army and other DoD personnel stationed and training at PTA. Modernization would be achieved through replacement and renovation of existing facilities.

PTA is located in the saddle region of Hawaii Island, between Mauna Kea (13,794 feet above mean sea level [amsl]), Mauna Loa (13,678 feet amsl), and Hualalai (8,721 feet amsl) volcanoes (Figure 1-1). The cantonment ground elevation is approximately 6,300 feet amsl. PTA is approximately 35 miles west of Hilo, 55 miles northeast of Kailua-Kona and about 40 miles southeast of Kawaihae Harbor, the commercial port through which most of PTA's material and supplies are shipped. In addition, commercial airports in Hilo and Kona are used for the transport of troops to Hawaii Island. Most of PTA lies within the Hamakua District, one of nine districts on Hawaii Island. Access to PTA is via the state-owned Daniel K. Inouye Highway (State Route 200) from Hilo and a combination of state highways from Kailua-Kona and Kawaihae.

After thorough assessment, the Army has determined that the proposed action, as described above, would not conflict with CZMA policies. Additionally, the proposed action would be compatible with the objectives, policies and guidance of other state and



local land use plans such as the County of Hawaii General Plan. It is important to note that no land is being acquired, rezoned or changed for the proposed action and the proposed activities are consistent to the maximum extent practicable with the enforceable policies of Hawaii's CZMA program. Section 304 of the Act states that the term "coastal zone" does not include "lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal government." This exempts all lands federally owned, leased, or held in trust. PTA's cantonment is located wholly within Army owned land and is, therefore, excluded from the coastal zone.

That stated, the Army recognizes that actions outside the coastal zone may affect land or water uses or natural resources along the coast and therefore are subject to the provisions of the Act. Consequently, an analysis of the impacts of the proposed action on the coastal zone was conducted for the following areas:

1. **Land Use Compatibility** - The proposed action will not adversely affect the land uses because construction of the Facility Improvement Program (FIP) projects will not alter land use.

2. **Traffic** - The proposed action will not adversely affect traffic because construction traffic will only be short term and managed in a manner that does not disrupt cantonment and public vehicular traffic.

3. **Noise** - Other than temporary, daytime ambient noise from construction activities, the proposed action will not adversely affect current noise levels.

4. **Topography and Soils** - The proposed action will not adversely affect the topography and soils in the project area as the site is fairly flat, previously developed and will require minimal site preparation/grading.

5. **Air Quality** - The proposed action will not adversely affect air quality beyond temporary fugitive dust and fossil fuel emissions for the actual construction.

6. **Biological Resources** - The Army determined the proposed action would not likely adversely affect biological resources and thus initiated Section 7 Consultation under the Endangered Species Act with the U.S. Fish and Wildlife Service (USFWS) seeking concurrence. The USFWS has concurred that the proposed action will not adversely affect biological resources.

7. **Cultural Resources** - The Army determined the proposed action would not affect historic properties and thus initiated Section 106 consultation under the National Historic Preservation Act with the Hawaii State Historic Preservation Officer seeking



concurrence. The Keeper of the National Register of Historic Places has found that none of the buildings are eligible for the National Register.

8. **Water Resources** - The proposed action will not adversely affect water resources. National Pollutant Discharge Elimination System permits and Best Management Practices will be implemented by the contractor(s).

9. **Infrastructure and Utilities Systems** - The proposed action will not adversely affect public infrastructure and utilities. Upgrades to onsite infrastructure and utilities will have a beneficial impact as existing infrastructure and utilities do not meet current code.

10. **Visual Resources** - The proposed action will not adversely affect visual resources. The current public view plane of the cantonment is from Daniel K. Inouye Highway and is cluttered with a mix of aging Quonset huts, temporary trailers, and overhead utility lines and poles. Modernization will reduce the visual clutter with no impact on the important views toward Mauna Kea and Mauna Loa.

11. **Toxic and Hazardous Substances** - The proposed action will not cause an adverse effect due to toxic and hazardous substances. Any hazardous materials would be disposed of in accordance with all applicable regulations.

Based on the information summarized above, the Army has determined that the implementation of the FIP would have no effect on coastal uses or resources of Hawaii. If you need additional information about this negative determination, please contact Ed John Hewitt, Directorate of Public Works, Environmental Division at [ed.j.hewitt.civ@mail.mil](mailto:ed.j.hewitt.civ@mail.mil).

Sincerely,



Kent K. Watase, PE  
Director of Public Works