Office of the Garrison Commander

SUBJECT: National Environmental Policy Act (NEPA) Action Environmental Assessment and Draft Finding of No Significant Impact (EA and Draft FNSI)

Mr. Scott Glenn, Director
Office of Environmental Quality Control
Department of Health, State of Hawaii
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Mr. Glenn:

U.S. Army Garrison, Hawaii (USAG-HI) respectfully request publication of the EA and Draft FNSI for the Pohakuloa Training Area (PTA) Cantonment Facilities Improvement Program in the NEPA Actions section of the July 8, 2018 edition of The Environmental Notice. Enclosed is a completed Publication Form and a copy of the EA and Draft FNSI.

Should you have any questions, please contact Ms. Lisa Graham, USAG-HI, Directorate of Public Works, Environmental Division at lisa.m.graham52.civ@mail.mil.

Sincerely,

[Signature]
Stephen E. Dawson
Colonel, U.S. Army
Commanding

Enclosures
NEPA Action EA/EIS
Publication Form

Project: Cantonment Facilities Improvement Program (FIP) at Pohakuloa Training Area (PTA)
Name: Environmental Assessment and Draft Finding of No Significant Action

Island: Hawaii
District: Hamakua

TMK: [3] 4-4-2-016:006
Permits: N/A

Applicant or Proposing Agency: U.S. Army Garrison, Hawaii (USAG-HI)
Lisa Graham, NEPA Program Manager, USAG-HI
947 Wright Avenue
Wheeler Army Airfield,
Schofield Barracks, Hawaii  96857-5013
usaghi.pao.comrel@us.army.mil

Approving Agency: U.S. Army Garrison, Hawaii (USAG-HI)
Lisa Graham, NEPA Program Manager, USAG-HI
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Consultant: HHF Planners
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733 Bishop Street, Suite 2590
Honolulu, Hawaii  96813
ATTN: Leslie Kurisaki
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(808) 457-3182

Status: Comment Period: July 8, 2018 to August 7, 2018
Written comments must be received or postmarked by August 7, 2018 to be considered.

Comments may be provided via email to: usaghi.pao.comrel@us.army.mil or mailed to:
Directorate of Public Works, Environmental Division (IMHW-PWE), Attn: Lisa Graham,
947 Wright Avenue, Wheeler Army Airfield, Schofield Barracks, HI  96857-5013.
Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page):

Pursuant to the National Environmental Policy Act, U.S. Army Garrison, Hawaii provides notice that a Draft Finding of No Significant Impact (FNSI) has been prepared based on the findings of an Environmental Assessment (EA) and that an Environmental Impact Statement is not required for the Implementation of the Facilities Improvement Program (FIP) at the PTA Cantonment, Hawaii Island, Hawaii.

The proposed action would include replacement of aging buildings within the federally-owned cantonment to meet current building codes and improve safety and quality of life for Army and other personnel stationed and training at PTA. The preferred alternative would modernize the quality of the facilities within the cantonment without increasing their capacity, total number of beds, existing building heights, or extending beyond the existing cantonment boundaries.

Copies of the EA and Draft FNSI are available for public review at the Hilo Public Library, Kailua-Kona Public Library, and Waimea Public Library. Copies can also be obtained by contacting the Army via email at usaghi.pao.comrel@us.army.mil or online at https://www.garrison.hawaii.army.mil/NEPA/NEPA.htm.

Written comments on the Draft FNSI must be received within 30 days of the publication of this notice (no later than August 7, 2018) and should be directed to the email address above or mailed to: Directorate of Public Works, Environmental Division (IMHW-PWE), Attn: Lisa Graham, 947 Wright Avenue, Wheeler Army Airfield, Schofield Barracks, HI 96857-5013.

Revised February 2012
ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT

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

JULY 2018

Prepared By: U.S. Army Corps of Engineers, Honolulu District
Prepared For: U.S. Army Garrison, Hawaii
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Draft 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.

PROPOSED ACTION AND ALTERNATIVES CONSIDERED

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 (DKI) Highway, and several new buildings constructed in the early 2000s.

The EA evaluates the environmental impacts of the FIP, specifically the preferred alternative described below. The no-action alternative is also addressed.

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.

In addition to the preferred alternative, USAG HI analyzed a no-action alternative. 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.

Both the preferred alternative and the no-action alternative are evaluated in the EA.

**SUMMARY OF ENVIRONMENTAL ANALYSIS**

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 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 AND COMMENT

This Draft Finding of No Significant Impact (FNSI) has been issued in conjunction with the EA and incorporates it by reference. Notice of Availability of the EA and Draft FNSI will be published in the Hawaii Tribune-Herald and West Hawaii Today newspapers, and in the July 8, 2018, edition of The Environmental Notice (Office of Environmental Quality Control, State of Hawaii Department of Health). Copies of the NOA will also be mailed to public and private stakeholders believed to have an interest in the proposed action.

The EA and Draft FNSI are available for download for 30 days from the publication of this notice at: https://www.garrison.hawaii.army.mil/NEPA/NEPA.htm. Paper copies of the EA and Draft FNSI are also available for public review at the following public libraries: Hilo Public Library, Kailua-Kona Public Library, and Waimea Public Library, as well as via download from the OEQC website: http://health.hawaii.gov/oeqc.

Written comments on this Draft FNSI must be received within 30 calendar days after its initial publication. Comments can be emailed to usaghi.pao.comrel@us.army.mil or mailed to the Directorate of Public Works, Environmental Division (IMHW-PWE), Attn: Lisa Graham, 947 Wright Avenue, Wheeler Army Airfield, Schofield Barracks, HI 96857-5013.
FINDING

After careful review of the EA, I have concluded that implementation of the Proposed Action would not have a significant impact on the quality of the human or natural environment. Per 32 CFR Part 651, the EA and Draft FNSI will be made available for a 30-day public review and comment period. Once any public comments have been addressed, and if a determination is made that the Proposed Action will have no significant impact, the FNSI will be signed and the action will be implemented. This analysis fulfills the requirement of NEPA and the Council on Environmental Quality Regulations. Therefore, an environmental impact statement is not required.

This Finding of No Significant Impact has therefore been prepared and is submitted to document environmental review and evaluation in compliance with NEPA.

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

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

REVIEWED BY:

Lisa Graham 6 June 2018
NEPA Program Manager
Directorate of Public Works
U.S. Army Garrison, Hawaii

SUBMITTED BY PROponent:

Rhonda I. Suzuki 6 June 2018
Environmental Division Chief
Directorate of Public Works
U.S. Army Garrison, Hawaii

APPROVED BY:

Stephen E. Dawson 19 June 2018
Colonel, U.S. Army
Commander
U.S. Army Garrison, Hawaii
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

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Phase Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY16</td>
<td>• South Storm Drainage Construction</td>
<td>Not part of proposed action. See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration</td>
</tr>
<tr>
<td></td>
<td>• Consolidated Sewer Collection System Construction</td>
<td></td>
</tr>
<tr>
<td>FY17</td>
<td>Utilities: Power, Telecommunications, and Lightning Protection and North Drainage System</td>
<td>Not part of proposed action. See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration</td>
</tr>
<tr>
<td>FY18</td>
<td>Remaining utilities Construction of Neighborhoods A and B</td>
<td>Not part of proposed action. See FY 17 description above.</td>
</tr>
<tr>
<td></td>
<td>10 barracks, 6 latrine/shower points, and 2 admin buildings; 18 buildings total</td>
<td></td>
</tr>
<tr>
<td>FY19-23</td>
<td>Construction of Neighborhoods: C, D, E, G, H, I, L, M, N, O, P and Q.</td>
<td>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</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Oversight Agency</th>
<th>Permit, Approval, or Consultation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii State Historic Preservation Officer (SHPO)</td>
<td>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)</td>
</tr>
<tr>
<td>United States Fish and Wildlife Service (USFWS)</td>
<td>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.)</td>
</tr>
<tr>
<td>Hawaii Department of Health, State of Hawaii</td>
<td>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.</td>
</tr>
<tr>
<td>Coastal Zone Management Program, State of Hawaii</td>
<td>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).</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Resource Areas</th>
<th>No-Action Alternative</th>
<th>Preferred Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use Compatibility</td>
<td>Significant impact due to continued deterioration of cantonment buildings.</td>
<td>Construction: Less than significant impact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Operation: No Impact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td>Traffic</td>
<td>No impact.</td>
<td>Construction: Less than significant impact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Operation: No impact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>No impact.</td>
<td>Archaeological resources: No impact. State Historic Preservation Officer (SHPO) concurred with determination of no “historic properties affected” by ground disturbing activities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architectural Resources: No impact. No properties eligible for listing on the National Register of Historic Places, and SHPO concurred with determination of “no historic properties affected.”</td>
</tr>
<tr>
<td>Resource Areas</td>
<td>No-Action Alternative</td>
<td>Preferred Alternative</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Biological Resources        | No impact.            | **Construction and Operation:** 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.  
Cumulative: Less than significant impact with minimization measures.                                                                                     |
| Noise                        | No impact.            | **Construction:** Less than significant impact.  
**Operation:** No impact  
**Cumulative:** Less than significant impact.                                                                                                             |
| Natural Hazards, Geology and Soils | Minor beneficial impact due to completion of ongoing FIP drainage improvements. | **Construction:** Less than significant impact.  
**Operation:** No impact.  
**Cumulative:** Less than significant impact.                                                                                                             |
| Air Quality                  | No impact.            | **Construction:** Less than significant impact.  
**Operation:** No impact.  
**Cumulative:** Less than significant impact.                                                                                                             |
| Water Resources              | Minor beneficial impact due to ongoing FIP drainage and utility improvements that are proceeding under no-action. | **Construction:** No impact.  
**Operation:** No impact.  
**Cumulative:** No impact.                                                                                                                                     |
| Public Facilities and Infrastructure | Ongoing FIP improvements to drainage and utilities will have beneficial impact under a no-action alternative. | **Construction:** Less than significant impact on public facilities and infrastructure.  
**Operation:** No impact on island-wide public facilities and infrastructure. Beneficial impact on Army facilities and services.  
**Cumulative:** Less than significant impact.                                                                                                               |
| Socioeconomics               | Ongoing FIP improvements to | **Construction:** Short-term beneficial impact.  
**Operation:** No impact on economic factors.                                                                                                               |
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...
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 identifies
  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.
- 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.

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

Measures for Invasive Pest Prevention
- Invasive Pest Prevention Standard Operating Procedures (IPPSOP) have been
  established to prevent the introduction of harmful invasive pests including reptiles,
  amphibians, invertebrates, weeds, and rapid ohia death (ROD) into PTA.
- All work vehicles, machinery, and equipment must be clean and free of debris prior to
  entering the PTA.
- Inspection of work vehicles, machinery, and equipment for invasive ants prior to
  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.
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# Cantonment Facilities Improvement Program
## Environmental Assessment
### July 2018

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<td>ACHP</td>
<td>Advisory Council on Historic Preservation</td>
<td>dBA</td>
<td>A-weighted decibels</td>
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<td>ACM</td>
<td>Asbestos containing material</td>
<td>DHHL</td>
<td>Department of Hawaiian Home Lands</td>
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<td>ACSS</td>
<td>Auxiliary construction support sites</td>
<td>DKI</td>
<td>Daniel K. Inouye Highway</td>
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<td>ADT</td>
<td>Average Daily Traffic</td>
<td>DLA</td>
<td>Defense Logistics Agency</td>
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<tr>
<td>amsl</td>
<td>above mean sea level</td>
<td>DoD</td>
<td>United States Department of Defense</td>
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<td>Army</td>
<td>United States Department of the Army</td>
<td>DoH</td>
<td>Department of Health</td>
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<td>AT/FP</td>
<td>Antiterrorism/Force Protection</td>
<td>DOT</td>
<td>Department of Transportation</td>
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<td>APE</td>
<td>Area of Potential Effect</td>
<td>DPW</td>
<td>Directorate of Public Works</td>
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<td>APZ</td>
<td>Accident Potential Zone</td>
<td>EA</td>
<td>Environmental Assessment</td>
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<td>BAAF</td>
<td>Bradshaw Army Airfield</td>
<td>EIS</td>
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<td>BMP</td>
<td>best management practice</td>
<td>EO</td>
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<td>BN</td>
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<td>Conservation District Use Permit</td>
<td>EPA</td>
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<td>Council on Environmental Quality</td>
<td>ESA</td>
<td>Endangered Species Act</td>
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<td>Facilities Improvement Program</td>
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<td>Code of Federal Regulations</td>
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<td>CMU</td>
<td>concrete modular unit</td>
<td>FNSI</td>
<td>Finding of No Significant Impact</td>
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<td>CO</td>
<td>company</td>
<td>FY</td>
<td>Fiscal Year</td>
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<td>carbon dioxide</td>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>Coastal Zone Management Act</td>
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<td>greenhouse gas</td>
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<td>Definition</td>
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<td>---------</td>
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<tr>
<td>gpd</td>
<td>Gallons per day</td>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
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<td>Hawaii Administrative Rules</td>
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<td>National Environmental Policy Act</td>
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<td>Hazardous materials and items</td>
<td>NHPA</td>
<td>National Historic Preservation Act</td>
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<td>Hawaii Electric Company</td>
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<td>nitrogen dioxide</td>
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<td>Hazardous materials</td>
<td>NOI</td>
<td>Notice of Intent</td>
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<td>Hazardous Materials Management Plan</td>
<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</td>
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<td>HW</td>
<td>Hazardous waste</td>
<td>NPS</td>
<td>U.S. National Park Service</td>
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<td>IBCT</td>
<td>Infantry brigade combat team</td>
<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
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<td>IIPBA</td>
<td>Infantry Platoon Battle Area</td>
<td>NRHP</td>
<td>National Register of Historic Places</td>
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<td>IPBC</td>
<td>Infantry Platoon Battle Course</td>
<td>NRO</td>
<td>Natural Resources Office</td>
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<td>IHWMP</td>
<td>Installation Hazardous Waste Management Plan</td>
<td>PCB</td>
<td>polychlorinated biphenyls</td>
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<td>Individual wastewater systems</td>
<td>PCSI</td>
<td>Pacific Consulting Services, Inc.</td>
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<td>IPPSOP</td>
<td>Invasive Pest Prevention Standard Operating Procedures</td>
<td>ppm</td>
<td>parts per million</td>
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<td>Keamuku Maneuver Area</td>
<td>PTA</td>
<td>Pohakuloa Training Area</td>
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<tr>
<td>LBP</td>
<td>Lead Based Paint</td>
<td>REC</td>
<td>Record of Environmental Consideration</td>
</tr>
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<td>LIBCT</td>
<td>Light Infantry Brigade Combat Team</td>
<td>RCRA</td>
<td>Resource, Conservation, and Recovery Act</td>
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<td>MBTA</td>
<td>Migratory Bird Treaty Act</td>
<td>RIMPAC</td>
<td>Rim of the Pacific</td>
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<td>MEF</td>
<td>Marine Expeditionary Force</td>
<td>ROD</td>
<td>rapid ohia death</td>
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<td>MILCON</td>
<td>Military Construction</td>
<td>ROI</td>
<td>region of influence</td>
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<td>MKRA</td>
<td>Mauna Kea Recreation Area</td>
<td>RPMP</td>
<td>Real Property Master Plan</td>
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<td>MOUT</td>
<td>Military operations in urban terrain</td>
<td>SBCT</td>
<td>Stryker Brigade Combat Team</td>
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<td>Acronym</td>
<td>Definition</td>
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<td>SHPO</td>
<td>State Historic Preservation Officer</td>
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<td>SPCCP</td>
<td>Spill Prevention Control and Countermeasures Plan</td>
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<tr>
<td>SRM</td>
<td>Sustainment, Restoration and Modernization</td>
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<td>SWPPP</td>
<td>Stormwater Pollution Prevention Plan</td>
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<td>TCP</td>
<td>Traditional cultural property</td>
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<td>TMK</td>
<td>Tax Map Key</td>
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<td>TMT</td>
<td>Thirty Meter Telescope</td>
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<td>TSCA</td>
<td>Toxic Substances Control Act</td>
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<td>UFC</td>
<td>Unified Facilities Criteria</td>
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<td>UH</td>
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<td>URL</td>
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<td>USACE</td>
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<td>U.S. Army Garrison, Hawaii</td>
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<td>U.S. Army Pacific Command</td>
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<td>U.S. Geological Survey</td>
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<td>USN</td>
<td>U.S. Navy</td>
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</tr>
<tr>
<td>vpd</td>
<td>Vehicles per day</td>
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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.
Figure 1-2: Location of the Project Area within PTA
1 Table 1-1: Summary of Existing Project Area Buildings and Uses

<table>
<thead>
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<th>Use</th>
<th>Buildings</th>
<th>Gross square feet</th>
<th>Floor Area Percentage</th>
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<tr>
<td>Residential (barracks)</td>
<td>66</td>
<td>117,441</td>
<td>42%</td>
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<tr>
<td>Industrial</td>
<td>37</td>
<td>77,570</td>
<td>28%</td>
</tr>
<tr>
<td>Administration</td>
<td>17</td>
<td>31,725</td>
<td>11%</td>
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<tr>
<td>Community Use</td>
<td>7</td>
<td>21,632</td>
<td>8%</td>
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<tr>
<td>Emergency Medical Services</td>
<td>6</td>
<td>10,670</td>
<td>4%</td>
</tr>
<tr>
<td>Dining Facility</td>
<td>6</td>
<td>11,082</td>
<td>4%</td>
</tr>
<tr>
<td>Shower/Latrine</td>
<td>6</td>
<td>7,057</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>145</strong></td>
<td><strong>277,177</strong></td>
<td><strong>100%</strong></td>
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2 Source: HHF; 2016 TAB and 2016 Facility Inventory
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Figure 1-3: Existing Project Area
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

<table>
<thead>
<tr>
<th>Oversight Agency</th>
<th>Permit, Approval, or Consultation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii State Historic Preservation Officer (SHPO)</td>
<td>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)</td>
</tr>
<tr>
<td>United States Fish and Wildlife Service (USFWS)</td>
<td>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.)</td>
</tr>
<tr>
<td>Hawaii Department of Health, State of Hawaii</td>
<td>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.)</td>
</tr>
<tr>
<td>Coastal Zone Management Program, State of Hawaii</td>
<td>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).</td>
</tr>
</tbody>
</table>

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 or mailed to the Environmental Division, Directorate of Public Works, United States Army Garrison, Hawaii, 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.
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, 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

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1 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/).

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

2.3 Alternatives Carried Forward for Analysis

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

2.3.1 No-Action Alternative

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

2.3.2 Facilities Improvement Program (Preferred Alternative)

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

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

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

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

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Phase Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY16</td>
<td>• South Storm Drainage Construction</td>
<td>Not part of proposed action. See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration</td>
</tr>
<tr>
<td></td>
<td>• Consolidated Sewer Collection System Construction</td>
<td></td>
</tr>
<tr>
<td>FY17</td>
<td>Utilities: Power, Telecommunications, and Lightning Protection and North Drainage System</td>
<td>Not part of proposed action. See description on pp. 2-6 to 2-8; already approved under Records of Environmental Consideration</td>
</tr>
<tr>
<td>FY18</td>
<td>Remaining utilities Construction of Neighborhoods A and B</td>
<td>Not part of proposed action. See FY 17 description above. 10 barracks, 6 latrine/shower points, and 2 admin buildings; 18 buildings total</td>
</tr>
<tr>
<td>FY19-23</td>
<td>Construction of Neighborhoods: C, D, E, G, H, I, L, M, N, O, P, and Q</td>
<td>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</td>
</tr>
</tbody>
</table>

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

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2 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”).
Figure 2-1: Proposed Project Area Site Plan
Barracks replacement phasing would displace between 400 and 700 beds in a given year for several years (accommodations for two to three companies), about 18-30% of available beds. Construction phasing will be coordinated with the Garrison Commander to ensure the periodic decreases in bed inventory does not impact operational readiness (Soldiers can use tents as a temporary accommodation if needed).

The preferred alternative involves repair and/or replacement of the cantonment Quonset huts\(^3\) and other buildings with one-story concrete masonry unit (CMU) structures of similar height and generally with the same floor area and footprint as the existing structures (Figure 2-2). The hipped, low-sloped, standing metal seam roofs depicted below would be similar to recent cantonment buildings (also shown below).

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

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

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

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

Electrical Lines: 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, protected from environmental factors and decluttering the mass of overhead wires that have been installed over the past number of decades. The new underground system would consist of a network of manhole/handhole/ducts connected to new pad-mounted transformers that will feed the individual buildings. When the work is complete, the overhead poles supporting the secondary service lines will be removed. Electrical and telecommunications upgrades have been reviewed under a July 2017 Record of Environmental Consideration.\(^6\)

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

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

\(^4\) Record of Environmental Consideration for Repair Cantonment Drainage (South), PTA, USAG-HI, April 12, 2016.
Figure 2-4: Conceptual Stormwater Drainage Plan
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,
crews will be educated on how to work safely around them. All speed limits will be followed and enforced.

- Tree trimming and removal will be avoided during Hawaiian hoary bat (*Lasiurus cinereus semotus*) breeding season, June 1 through September 15. All construction activities will take place during daytime. UFC standards for outdoor lighting will be followed.

- When the existing building adjacent to interpretive garden is demolished, garden is to remain intact.

- USFWS recommends that if construction activity may disturb non-native tree tobacco (*Nicotiana glauca*), the host plant for the Blackburn’s sphinx moth (*Manduca blackburni*), contact USFWS for additional guidance.

- Although there are currently no Yellow-faced bees (*Hylaeus anthyracinus*) in the cantonment, PTA is encouraged to continue surveying its property for this species.

### Measures for Invasive Pest Prevention

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

- All work vehicles, machinery, and equipment must be clean and free of debris prior to entering the PTA.

- Inspection of work vehicles, machinery, and equipment for invasive ants prior to 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.

### Alternatives Considered But Not Carried Forward for Detailed Analysis

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

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

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 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 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 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.

2.4.2 Construct New Facilities at a New Site

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

2.5 Summary of Potential Impacts to Resource Areas

The effects that the preferred alternative and no-action alternative would have on various facets of the biological and manmade environment are summarized in Table 2-1 from the analysis provided in Chapter 3. Potential impacts associated with the construction and operational phase are covered separately when warranted.
<table>
<thead>
<tr>
<th>Resource Areas</th>
<th>No-Action Alternative</th>
<th>Preferred Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td>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.</td>
<td>Construction: 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. Operation: No Impact Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td>Traffic</td>
<td>No Impact.</td>
<td>Construction: 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. Operation: No impact. No change in vehicle trip generation as a result of the proposed action; therefore, no effect on public roadways. Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td>Cultural</td>
<td>No impact.</td>
<td>Archeological Resources: 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]. Architectural Resources: 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</td>
</tr>
<tr>
<td>Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Areas</td>
<td>No-Action Alternative</td>
<td>Preferred Alternative</td>
</tr>
<tr>
<td>--------------------------------------</td>
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</tr>
<tr>
<td>Biological Resources</td>
<td>No impact.</td>
<td>Construction and Operation: 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. No impact on other biological resources. USFWS has determined that there will be “no effect” for Blackburn’s sphinx moth and Yellow-faced bees. Cumulative: Less than significant impact with minimization measures.</td>
</tr>
<tr>
<td>Noise</td>
<td>No impact.</td>
<td>Construction: 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. Operation: No impact; no change in operational activities or associated noise levels. Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td>Natural Hazards, Geology and Soils</td>
<td>Minor beneficial impact due to ongoing FIP drainage repairs that are proceeding under no-action alternative. Will address flooding</td>
<td>Construction: 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</td>
</tr>
<tr>
<td>Resource Areas</td>
<td>No-Action Alternative</td>
<td>Preferred Alternative</td>
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<td></td>
<td>which has caused soil erosion in the past. During construction of drainage and utility improvements, impacts to soils will be less than significant.</td>
<td>BMPs (see air quality discussion below) and compliance with NPDES permit conditions regarding construction-period erosion and sedimentation control. Operation: No impact. No change to land use, intensity of use, etc. Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>No impact.</td>
<td>Construction: 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. Operation: No impact. Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td>Water Resources</td>
<td>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.</td>
<td>Construction: No impact. NPDES stormwater permit BMPs will be implemented by the construction contractor to avoid impacts to water resources, including groundwater resources. Operation: No impact. Cumulative: No impact.</td>
</tr>
<tr>
<td>Public Facilities and Infrastructure</td>
<td>Ongoing FIP improvements to drainage, water, wastewater, electrical and telecommunications will have a beneficial impact on facilities and infrastructure. Modernized and more efficient systems, will improve efficiency and reduce ongoing</td>
<td>Construction: 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. Temporary interruption in service will inconvenience onsite personnel but will not be sufficient to degrade operational readiness.</td>
</tr>
</tbody>
</table>
### Resource Areas

<table>
<thead>
<tr>
<th>No-Action Alternative</th>
<th>Preferred Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomics</strong></td>
<td><strong>Preferred Alternative</strong></td>
</tr>
<tr>
<td><strong>Visual Resources</strong></td>
<td><strong>Preferred Alternative</strong></td>
</tr>
<tr>
<td>FIP utility improvements will remove overhead utility lines and will have beneficial visual impact.</td>
<td>Construction: Less than significant impact. Construction equipment such as bulldozers, backhoes, and cranes in the cantonment may occasionally be visible to the public from DKI Highway. These impacts will be temporary. Operation: 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. Cumulative: Less than significant impact.</td>
</tr>
<tr>
<td><strong>Toxic and Hazardous Substances</strong></td>
<td><strong>Preferred Alternative</strong></td>
</tr>
<tr>
<td>Less than significant impact. Any Hazardous materials encountered during FIP utility improvements will be handled in accordance with all applicable regulations.</td>
<td>Construction: Less than significant impact. Hazardous materials would be tested for, collected and disposed in accordance with all applicable regulations. Operation: 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. Cumulative: Less than significant impact.</td>
</tr>
</tbody>
</table>
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
3.1 Land Use Compatibility

3.1.1 Affected Environment

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

Bradshaw Army Airfield (BAAF), an Army-owned Class A airfield, is located about 0.5 miles to the west of the project area. Part of project area is located within the BAAF Accident Potential Zone (APZ) extending from the east end of the 3,700-foot runway (see Figures 1-2 and 1-3). 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.

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

- Company-level barracks and support services (latrines, shower points, and headquarters)
- Battalion (BN)-level facilities (including dining facilities, and headquarters and first aid stations, etc.)
- 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 quarrying, 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 DKI 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.7

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:

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

- Hunting of feral ungulates
- Scattering of cremation remains
- Ranching

Consultants for the PCSI study reported the presence of human burial from observation and oral traditions, but did not provide exact locations (U.S. Army Environmental Command 2013). 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 and the persistence of bird hunting, one of the major traditional uses of the area from prehistoric times into the early part of the twentieth century (ibid).

Research conducted by Maly (1997; Maly & 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.

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

A number of archeological surveys within the cantonment (including the project area) have been undertaken by the PTA Cultural Resources Management Office (CRO), including some on the list below. Archeological monitoring has also been conducted for several projects. None of the archeological studies have identified any archeological deposits or archaeological sites. Due to the random sampling of the cantonment area 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.

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

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.

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

3.3.2 Environmental Consequences

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

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

3.3.2.1 Archaeological Resources

Both the FIP building components and utility components will involve excavation, surface grading and leveling, which have the potential to affect archaeological resources at or below the ground surface level. These activities were evaluated and determined to 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.\(^8\) 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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\(^8\) 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.
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 § 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 20019.

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”10. No naturally occurring federally listed or candidate plant species are known to exist in the project area.11

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 indicia*, *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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10 U.S. National Vegetation Classification Geodatabase, 2013
11 USFWS Request for Informal Consultation Concurrency and Conference, June 2016.
Terrestrial Wildlife

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

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

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

Mammals: The Hawaiian hoary bat (*Lasiurus cinereus semotus*) is the only native land mammal at PTA and is known to forage at night in the cantonment area. Other mammals that occur on PTA consist of introduced game animals, including the feral pig (*Sus scrofa*), feral sheep (*Ovis aries*), goats (*Capra hircus*), and mouflon sheep (*Ovis mismon*), and other introduced species, including rat species (*Rattus rattus*), mongoose (*Herpestes auropunctatus*), mice (*Mus domesticus*), feral dogs (*Canis familiaris*), and feral cats (*Felis catus*). On PTA, these species are considered a nuisance, and mitigation efforts, such as fences, trapping, and eradication, are in place to control their populations (U.S. Army Environmental Command 2013a).

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

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14 Gon SM, Honigman L., Zevin D., Fulks W, David. 1993 Vertebrate inventory surveys at the multipurpose range complex, Pohakuloa Training Area, Island of Hawaii
15 Personal communication with Lena Schnell, Pohakuloa Natural Resource Office, May 9, 2016
### Table 3-1: Protected Bird Species of the PTA Cantonment

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barn Owl&lt;sup&gt;c&lt;/sup&gt;</td>
<td><em>Tyto alba</em></td>
</tr>
<tr>
<td>Hawaiian Amakihi&lt;sup&gt;ab&lt;/sup&gt;</td>
<td><em>Hemignathus virens</em></td>
</tr>
<tr>
<td>Hawaiian Goose&lt;sup&gt;abd&lt;/sup&gt;</td>
<td><em>Branta sandvicensis</em></td>
</tr>
<tr>
<td>House Finch&lt;sup&gt;ac&lt;/sup&gt;</td>
<td><em>Haemorhous mexicanus</em></td>
</tr>
<tr>
<td>Northern Mockingbird&lt;sup&gt;ac&lt;/sup&gt;</td>
<td><em>Mimus polyglottos</em></td>
</tr>
<tr>
<td>Pacific Golden Plover&lt;sup&gt;ab&lt;/sup&gt;</td>
<td><em>Pluvialis fulva</em></td>
</tr>
<tr>
<td>Sky Lark&lt;sup&gt;ac&lt;/sup&gt;</td>
<td><em>Alauda arvensis</em></td>
</tr>
</tbody>
</table>

<sup>a</sup> Migratory Bird Treaty Act listed species  
<sup>b</sup> Native species  
<sup>c</sup> Non-native, non-game species  
<sup>d</sup> Endangered

#### 3.4.2 Environmental Consequences

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

Environmental consequences of the preferred alternative are discussed below:

##### 3.4.2.1 Terrestrial Vegetation

There are no naturally occurring listed plant species within the 80-acre project area. However, there are several listed species out-planted in the interpretive garden managed by NRO staff. While the building adjacent to the garden (Building T-93) is scheduled for demolition in FY 2023, the proposed action will result in no changes to the physical structure of the interpretive garden. Measures will be taken to avoid or minimize impacts to any federally-listed and candidate plant species that may be present in the garden during construction activities. 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.

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

##### 3.4.2.2 Terrestrial Wildlife

The non-native species of birds, mammals, and reptiles that are present are tolerant of the current cantonment activities and noise, which includes the presence of personnel, vehicle traffic, and occasional nighttime lighting. No permanent loss of habitat would occur under the preferred alternative. Habitat removal would be negligible and would not negatively impact 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.\(^\text{16}\)

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

\(^\text{16}\) 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 burros, 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 fulfill 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 Waikī 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 Pūu 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 (CO₂) had been measured as increasing to 325 parts per million (ppm) from an average of 280 ppm pre-Industrial levels. 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

17 National CO₂ 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\textsubscript{2}), methane (CH\textsubscript{4}), nitrous oxide (N\textsubscript{2}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\textsuperscript{rd} in total CO\textsubscript{2}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\textsubscript{2}e. 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\textsubscript{2}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\textsubscript{2}e and 8,156 MT/yr CO\textsubscript{2}e, 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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\textsuperscript{18} CO\textsubscript{2}e – Carbon dioxide equivalent; is a term describing different GHG components as a common unit which would have the equivalent global warming impact.

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

\textsuperscript{20} 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$_2$e over the eight year construction period (an average of 825 MT/yr CO$_2$e).\textsuperscript{21} 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.

\textsuperscript{21} 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 DKI 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.


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

There would be 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.
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
Table 4-1 Past, Present, and Reasonably Foreseeable Future Actions

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<tr>
<th>Action</th>
<th>Description</th>
<th>Year</th>
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<tr>
<td>Draft PTA Real Property Master Plan (RPMP)</td>
<td>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. 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. A summary of the planned short and long range projects to be analyzed in the RPMP EA include (location in parenthesis): Short Range Projects (0-7 years): - Cantonment Facilities Improvement Program (FIP) (including drainage, utility and building components) - Ammunition Holding Area 1-3 de-licensing (cantonment) - Training Complex (cantonment) - Fire Protection Improvements (BAAF) Kawaihae Harbor Ramp and Dolphin Repairs (Kawaihae Harbor) Unmanned Aerial System Hangar (Cooper Airstrip) Long Range Projects (8-20 years) - Pre-Positioned Storage Facilities (cantonment) - Tactical Vehicle Staging Area (cantonment) - Base X Tent City (cantonment) - Production Water Well (Location TBD) - Ammunition Supply Point Improvements (range) - Range Road Improvements (range) Aviation Gunnery Range (range)</td>
<td>20-year horizon</td>
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<td>Action</td>
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<td>Cantonment Facilities Improvement Program (FIP) (drainage and utility components)</td>
<td>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. 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.</td>
<td>2016-2023</td>
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<tr>
<td>Daniel K. Inouye (DKI) Highway</td>
<td>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. 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.</td>
<td>Ongoing</td>
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**Sources:** Saddle Road Extension Project Website: [https://flh.fhwa.gov/projects/hi/saddle-ext/](https://flh.fhwa.gov/projects/hi/saddle-ext/) accessed April 8, 2018

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).
### Stryker Brigade Combat Team

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.

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.

**Sources:** FEIS/ROD (USAG-HI February/April 2008)

### Infantry Platoon Battle Course (IPBC)

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.

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.

**Sources:** FEIS/ROD (USAG-HI March/June 2013)
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<td>Hawaii Island Commercial Harbors</td>
<td>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. 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. 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. <strong>Sources:</strong> Hawaii DOT Harbors 2035 Master Plan Update (DOT-H August 2011) and FEA/FONSI for improvements to Kawaihae Harbor (DOT-H October 2013)</td>
<td>Ongoing</td>
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<td>Hawaii Island Commercial Airports</td>
<td>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. 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. <strong>Sources:</strong> Kona International Airport Master Plan (DOT-A October 2010) Hilo International Airport Master Plan (DOT-A November 2001) First Hawaii Bank Economic Forecast Hawaii Island Edition 2015-2016</td>
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<td>Mauna Kea Observatories (Thirty Meter Telescope)</td>
<td>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</td>
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<td>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.</td>
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<td>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. 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. TMT officials have said they plan to build the telescope in Spain’s Canary Islands if they are unable to build in Hawaii. 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.</td>
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### Action | Description | Year
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Department of Hawaiian Home Lands (DHHL) Humuula/Piihonua tracts (neighbor of PTA) | DHHL manages approximately 117,000 acres of land in Hawaii County and its Humuula/Piihonua 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-feet elevations. The Humuula parcel is approximately 49,100 acres in size and the Piihonua 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.
DHHL seeks to restore portions of the Humuula/Piihonua lands in perpetuity to conserve these native forests and natural habitats for future generations. DHHL believes that the Humuula/Piihonua 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.
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.
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.
**Source:** Department of Hawaiian Home Lands Aina Mauna Legacy Program (Hookuleana LLC December 2009) | Proposed
<table>
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<th>Action</th>
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<tr>
<td>Mauna Kea Recreational Area (neighbor of PTA)</td>
<td>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.</td>
<td>Ongoing</td>
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| Changes in Military Training at PTA        | 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. **Source:** Hawaii News Now July 9, 2015  
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. **Source:** 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.  
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. **Source:** U.S. Pacific Command press release (April 24, 2016) | Ongoing |
PTA Water Well

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.

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.

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.

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.

Sources: Humuula Saddle Region Hydrologic-Evaluation-and-Exploratory Drilling Project Final EA/FONSI (UH March 2014)


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 irretreivable 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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6 References


Cooper, BA, David RE, Blaha RJ, 1996. Radar and visual surveys of endangered seabirds and bats in the Pohakuloa Training Area, Hawaii, during summer 1995. Forest Grove (OR); ABR, Inc. and Kailua-Kona (HI); Rana Productions, Ltd. 56 p.


County of Hawaii and State of Hawaii, 2010, Final Supplemental Environmental Impact Statement and Final 4(f) Evaluation, Saddle Road (State Route 200) Mamalahoa Highway (State Route 190) to Milepost 41.

County of Hawaii Department of Research and Development, 2016, *Hawaii County Data Book 2015*.


University of Hawai‘i, 2009, Mauna Kea Comprehensive Management Plan, UH Management Areas.


U.S. Army Aeronautical Services Agency, October 2016. Memorandum for Permanent Waiver to Unified facilities Criteria (UFC) for Pōhakuloa Training Area.


US Army Garrison-HI. April 12, 2016. Record of Environmental Consideration for Repair Cantonment Drainage (South), PTA.

US Army Garrison-HI. April 12, 2016. Record of Environmental Consideration for Repair of Sewer Collection System, PTA.


U.S. Army Garrison-HI, 2016, June 27. Letter Re: 1) Informal consultation concurrence request for determining the Pohakuloa 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 Pohakuloa Training Area Facilities Improvement Program is not likely to adversely affect the Band-rumped Storm Petrel, Hawaiian Yellow-faced Bee, and candidate plant species.
U.S. Army Garrison-HI, 2016, June 27. Letter Re: Response to comments regarding the
informal consultation and conference concurrence request for determining the
Pohakuloa 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.

U.S. Army Garrison Pōhakuloa, November 2017. Environmental Assessment and Draft
Finding of No Significant Impact for Integrated Cultural Resources Management Plan
(2017-2021).

of Hawaii, State of Hawaii.

U.S. Environmental Protection Agency (EPA), 2014. Inventory of U.S. Greenhouse Gas

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).

U.S. Dept. of Transportation Federal Transit Administration, 2006, Transit Noise and

U.S. Dept. of Transportation, 2006, Construction Noise Handbook, DOT-VNTSC-FHWA-06-02,
U.S. Department of Transportation, August 2006.

for routine military training and transformation of the 2nd Brigade 25th Infantry
Division, US Army Installations, Island of Hawaii.

U.S. Fish and Wildlife Service, 2005. Recovery Plan for Blackburn’s sphinx moth (Manduca

U.S. Fish and Wildlife Service, 2015. Federal Register Vol. 80 No. 189: Endangered and
threatened wildlife and plants; endangered status for 49 species from the Hawaiian
Islands; proposed rule.
7 List of Preparers

U.S. Department of the Army

USAG-HI Directorate of Public Works
Lisa Graham, NEPA Program Manager, Environmental Division

A-E Contractor: HHF Planners

Thomas A. Fee, AICP, Principal Investigator and contributing author
Master of Urban and Regional Planning, University of Hawaii at Manoa
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Leslie Kurisaki, Associate, Project Manager and principal author
Master of Arts in Urban Planning, University of California, Los Angeles
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Shelley Franklin, AICP, contributing author
Doctor of Architecture, University of Hawaii at Manoa
Years of Experience: 15
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)
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

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
Kaʻōhe Mauka Ahupuaʻa, Hāmākua District, Island of Hawaiʻi
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.
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 for any questions regarding architectural resources. Please contact Susan Lebo, Archaeology Branch Chief, at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov for any changes in the project APE or scope of work or questions or concerns regarding this letter.

Mahalo,

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)
Office of the Commander


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 Pōhakuola 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 airfield 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.

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
March 20, 2018

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  
Kaʻohe Ahupuaa, Hamākua 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 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
Office of the Garrison Commander

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

Dr. Alan Downer
Deputy State Historic Preservation Officer
State Historic Preservation Division
Department of Land and Natural Resources
Kakuhihewa 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 archaeological 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 18, 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.

Sincerely,

[Signature]

Stephen E. Dawson
Colonel, US Army
Commanding

Enclosures
ENCLOSURE 1
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 Uneaccompanied 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.

Sincerely,

Stephen E. Dawson
Colonel, US Army
Commanding

Enclosures
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 96855-5000

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: Kaohle Atupu'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-039, T-090, T-109, T-184, T-230, T-246, T-285, T-286, T-290, and T-293 is 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.

Continued on Page 2
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 for any questions regarding archaeological resources. Please contact Megan Borthwick, Architectural Historian, at (808) 692-8029 or at Megan.Borthwick@hawaii.gov for any questions regarding architectural resources or this letter.

Mahalo,

[Signature]

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)
Kenneth Hays (kenneth.w.hays2.civ@mail.mil)
Lisa Graham (lisa.m.graham52.civ@mail.mil)
Rhonda Suzuki (rhonda.suzuki.civ@mail.mil)
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 8th 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 15th 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 9th 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. The 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.

Sincerely,

[Signature]

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

Enclosures
March 2, 2017

Col. 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

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
Ko‘olau Acquisition, Hawai‘i

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(c). 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 #2016.011481 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.
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 for any questions regarding architectural resources, and Susan Lebo, Archaeology Branch Chief, at 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
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: Lisa Graham: Lisa.m.Graham52.civ@mail.mil
Sally Pfenning: Sally.g.pfenning.civ@mail.mil
Rhonda Suzuki: Rhonda.l.suzuki.civ@mail.mil
Katherine Kerr: Kkerr@achp.gov
Office of the Commander


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 55000 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 55000 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 airfield 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 archeological 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.clv@mail.mil.

Sincerely,

[Signature]

[Name]
Lieutenant Colonel, US Army
Commanding

Enclosures
Mr. Tom Lenchanko  
Aha kukaniloko koa mana mea ola kanaka mauli

Mr. Haahoe 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
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

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‘ohe Mauka Ahupua‘a, Hamākua 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.
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 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 for any changes in the project APE or scope of work or questions or concerns regarding this letter.

Mahalo,

[Signature]

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

cc: Dr. Julie M. Tuomia, PTA Archaeologist (Julie.m.tuomia.civ@mail.mil)
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

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  
Kā‘ōle Mu‘u‘u Akahui‘a, Hamākua 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 Personal 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.

IN REPLY REFER TO:  
Log No. 2016.00343  
Doc. No. 1603MB37  
Archaeology, Architecture  
“No Historic Properties Affected”
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 for any questions regarding architectural resources. Please contact Susan Lebo, Archaeology Branch Chief, at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov for any changes in the project APE or scope of work or questions or concerns regarding this letter.

Mahalo,

[Signature]

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)
ENCLOSURE 2
Office of the Garrison Commander

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. I am also providing a copy of this letter to Dr. Alan Downer, Deputy State Historic Preservation Officer.

Sincerely,

[Signature]

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 4 to 15 June 2016 Letter: List of affected buildings not covered by the Program Comment.


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.
# DETERMINATION OF ELIGIBILITY NOTIFICATION

**National Register of Historic Places**
**National Park Service**

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

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

**Location:** Hawai‘i County, Hawai‘i

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

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

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Pohakuloa Training Area Historic District

Eligible

Insufficient Information

(See attached Comments)

08/17/2017

Keeper of the National Register

Date
Determination of Eligibility Notification

National Register of Historic Places
National Park Service

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 1930s 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 climatic, 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
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 those 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. 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
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  X Not Eligible

Keeper of the National Register  1/18/2018 Date
<table>
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<tr>
<th>Name</th>
<th>Affiliation</th>
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<tr>
<td>Mr. William J. Aila, Jr Mrs. Melva N. Aila Hui Mālama O Mākua</td>
<td>Mr. Kamuela Bannister Office of Hawaiian Affairs</td>
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<tr>
<td>Ms. Annelle Amaro Association of Hawaiian Civic Clubs</td>
<td>Ku‘auhau Mamo Jordan Hollister Royal Order of Kamehameha Moku ‘O Kohala</td>
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<td>Ms. Geri Bell Hawai‘i Council, Association of Hawaiian</td>
<td>Mr. E. Kalani Flores Flores-Case ‘Ohana</td>
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<td>Mr. Norman Mana Kaleilani Cáceres ‘Ohana Huihui</td>
<td>Dr. Ha‘aheo Guanson Pacific Justice and Reconciliation Center Native Hawaiian Church</td>
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<td>Dr. Kamana‘opono Crabbe Office of Hawaiian Affairs Attn: OHA Compliance Enforcement</td>
<td>Mr. Rick Gmirkin Ala Kahakai National Historic Trail National Park Service</td>
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<td>Ms. Melia Lane-Kamahele National Park Service PWRO Honolulu</td>
<td>Mr. Craig V. Kahui La‘i‘Opu 2020</td>
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<td>Ms. Kiersten Faulkner Historic Hawaii Foundation</td>
<td>Mr. All‘ikaua Kaleikini ‘Ohana Kawai‘ui</td>
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<tr>
<td>Ali‘i Sir Nathan Grace Royal Order of Kamehameha I Moku ‘o Kōhala</td>
<td>Mr. Daniel Kawaiaea, Jr. Pu‘ukohola Heiau National Historic Site National Park Service</td>
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<td>Ali‘i Sir David Heaukulani Royal Order of Kamehameha I Moku ‘o Māmalahoa</td>
<td>Mr. Kalahikiola Kelinoi ‘Ohana Kelinoi</td>
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<tr>
<td>Ms. Paulette Ka‘anohiokalani Kaleikini ‘Ohana Keaweamahi</td>
<td>Mr. Tom Lenchanko Kahuakai Ola Ko Lalla Waha Olelo ‘Aha Kūkaniloko Ko‘a Mana Mea Ola Kanaka Mauli</td>
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<td>Mr. Kala Waahila Kaleikini ‘Ohana Kaleikini</td>
<td>Ms. Stephanie Nagata Office of Maunakea Management University of Hawai‘i at Hilo</td>
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<tr>
<td>Mr. James Medeiros ‘Ohana Medeiros</td>
<td>Ms. Cindy Orlando Hawaii Volcanoes National Park</td>
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<tr>
<td>Mr. Edwin Miranda Hawaii Island Burial Council State Historic Preservation Division, Kona Office</td>
<td>Ms. Kaleo Paik Hoi Mai Ka Lei I Mamo Aha Wahine</td>
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</tbody>
</table>
ENCLOSURE 3
SUBJECT: National Historic Preservation Act Section 106 consultation for Facility Improvement Program at the Pohakuloa Training Area; Ka‘ōhe Ahupua‘a, Hāmākua District, Island of Hawai‘i [TMK: (3) 4-4-016:001], Architecture Review

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

Section 7, Endangered Species Act Consultation

In Reply Refer To:
01FIP00-2016-1-0504

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, elime, 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.
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 *Neraulia ovata*, *Silene lanceolata*, and *Solanum incomplenum*. 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, *Neraulia ovata*, *Silene lanceolata*, or *Solanum incomplenum*. 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 blackburnii*): 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 (*Hylaecus anthracinus*): Initially, you requested the Service’s concurrence with a “may affect, not likely to adversely affect” determination for *Hylaecus 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,

Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island
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, un referenced) 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'ahamuku Maneuver Area. The PTA NRO staff monitors the area and controls *N. glauca* as needed.

Therefore, the Army determines that the Pōhakulao 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. 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. I am also available at 808-969-2407, christopher.m.marquez3.mil@mail.mil. Please do not hesitate to call Ms. Kawelo, Mr. Fleming, or me to discuss this matter further.

Sincerely,

[Signature]

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

Page 3 of 4
REFERENCES


[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.


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.
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 wastewater 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 *Hylaenus 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 *Hylaenus* (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. 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. I am also available at 808-969-2407, christopher.m.marquez3.mil@mail.mil. Please do not hesitate to call Ms. Kawelo, Mr. Fleming, or me to discuss this matter further.

Sincerely,

[Signature]

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


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
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
concurrency. 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.

Sincerely,

Kent K. Watase, PE
Director of Public Works