
CHAPTER 8

PŌHAKULOA TRAINING AREA

8.1	INTRODUCTION	8-1
8.2	LAND USE/RECREATION	8-11
8.3	VISUAL RESOURCES	8-33
8.4	AIRSPACE USE	8-46
8.5	AIR QUALITY	8-51
8.6	NOISE	8-73
8.7	TRAFFIC	8-93
8.8	WATER RESOURCES	8-101
8.9	GEOLOGY, SOILS, AND SEISMICITY	8-112
8.10	BIOLOGICAL RESOURCES	8-133
8.11	CULTURAL RESOURCES	8-176
8.12	HUMAN HEALTH AND SAFETY HAZARDS	8-208
8.13	SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE	8-230
8.14	PUBLIC SERVICES AND UTILITIES	8-236

CHAPTER 8

PŌHAKULOA TRAINING AREA

8.1 INTRODUCTION

The proposed action at PTA would require constructing various training and support facilities, acquiring additional land, and changing training activities and locations. The following text provides a description of these proposed activities; for detailed construction information, see Appendix D, Construction Details. Potential environmental impacts associated with these proposed activities are discussed in detail throughout the remainder of this chapter.

8.1.1 Proposed Action

Construction

Construction of Anti-Armor Live Fire Training Range

The proposal includes the construction of a modified AALFTR at PTA on the island of Hawai'i. The project would be constructed on Ranges 3, 8, and 10 and would include 21 Stationary Armor Targets (SAT) and 8 Armor Moving Targets (AMT). All targets would be fully automated, and the event specific-target scenario would be computer-driven and scored from the control towers. Other range features would include baseline firing positions, primary and secondary power and data distribution systems, and heated and illuminated limit markers. The AALFTR would allow anti-armor forces to simulate enfilading fire (sweeping gunfire) as they move along the flank of an opposing force before joining the larger force at the programmed BAX, much as they would in an actual battle. Range 8 would be developed as a complete Range Operations Control Area (ROCA); minimal ROCA facilities would be developed at Ranges 3 and 10.

Construction of Battle Area Complex

A BAX would be constructed at PTA for company gunnery training and qualification requirements of the weapons systems included as part of the proposed SBCT. This range would also support mounted and dismounted infantry platoon tactical live-fire operations, either independently of, or simultaneously with, supporting vehicles. The training assets at

Range 12 would be demolished so that the new layout could be overlain and accommodated. The primary features of the range would include four course roads with crossover capability, 30 reconfigurable SATs, 6 MATs, 174 reconfigurable stationary infantry targets (SITs), 14 moving infantry targets (MITs), 17 machine gun/observation bunkers, 2 gunnery/breaching obstacles, 3 landing zones, 18 mortar simulation devices (MSDs), 16 hulldown defilades, vehicle firing positions, grenade/breach facades/trench complexes, and military vehicle trails and service roads. Other range operation facilities would include an observation tower, a range control center, an after-action review facility, an operations/storage building, an ammunition breakdown building, an ammunition loading dock, a latrine, a bleacher enclosure, a covered mess facility, and site improvements.

Construction of Military Vehicle Trail

The PTA Trail would replace a seldom used military vehicle trail that parallels Saddle Road. The current military vehicle trail passes through grazing lands and fields and is vegetated. The proposed road would consist of a 24-foot- (7-meter-) wide gravel road and a 3-foot- (1-meter-) wide shoulder on either side of the road. It would run approximately 27 miles (43 kilometers), connecting Kawaihae Harbor to the PTA. Work would include grading, paving, improving drainage, installing culverts at stream crossings and guardrails at drop-offs, and building storm drainage structures. Road grades steeper than 10 percent would be paved with asphalt or concrete. Where it runs through the Pu'u Kohala Heiau National Historic Site, the PTA Trail would occupy trails that the Army has used for over ten years and for which the Army is renegotiating access rights from the state and the National Park Service. Until the PTA Trail is complete, the Army would use public roads for travel from Kawaihae to PTA.

Construction of Ammunition Storage Area

This proposal is to add three earth-covered ammunition igloos, totaling 6,750 square feet (627 square meters), to the existing ammunition storage facility. An ammunition holding area for daily distribution of ammunition would be constructed to safely hold loaded vehicles. Work would also include installing pole-mounted security lights, floodlights mounted above each entrance, and telephone and computer systems. Supporting facilities would include utilities, electric service, storm drainage, paving, access roads, and site improvements.

Construction of Tactical Vehicle Wash Facility

The proposal is to construct a tactical vehicle wash facility with four wash stations. The stations would be sized to support a 60-foot- (18-meter-) long by 12-foot- (8-meter-) wide vehicle. The primary facility would consist of the preparation area and wash stations, featuring a high-pressure wash system. It would recycle water to minimize wastewater disposal. The water would flow through a water sediment basin, oil-water separators, and equalization basin and be recycled into a water supply reservoir. Treatment would include oil, grease, and grit removal and organic control. An oil-water separator would be provided to treat any residual water that does not go through the main system. A structure would be provided to house the mechanical secondary treatment units and the control panels necessary for the facility. This structure would be approximately 40 feet (12 meters) by 30 feet (9 meters). The structure would require louvers and would have a large door to install equipment and for maintenance. This facility would be built on a previously disturbed site.

Construction of Range Maintenance Facility

The proposed 15,150-square-foot (1,407-square-meter) consolidated range maintenance complex would be constructed on a previously developed site within the cantonment area of PTA. It would include administrative space for range maintenance, a carpentry shop, a welding shop, target and raw material storage, and parking for personal vehicles and other vehicles and equipment used by Range Division. Supporting facilities include a potable water system, a septic system, electric service and 150-kVA, three-phase transformer, paving, walks, parking, security fencing, and information systems. Air conditioning (estimated at 10 tons) would be provided for the administrative areas only. Mechanical ventilation will be provided in the warehouse and shop area.

Runway Upgrade/Extension, Bradshaw Army Airfield

This project involves constructing an aircraft runway that would provide a 5,600-foot-long (1,667-meters long) full strength paved runway with 300-foot-long (1,000-meters-) full strength paved overruns on each end. An operation complex to support runway activity would also be constructed. The total length of full strength pavement would be 6,200 feet (20,646 meters) long. The runway would be 100 feet (333 meters) wide with 25-foot-wide (83-meter wide) paved shoulders. This proposed configuration would provide a Class A Army airfield with the capabilities to operate the airfield as a training assault runway for C-17 and C-130 aircraft. Supporting facilities would include site preparation (clear/grubbing, excavation, grading, and storm drainage), a mobile asphalt concrete batching plant, water supply source and extension of the primary electrical service line from the base camp. The runway would be designed and lengthened to accommodate C-130 and C-17 aircraft under assault landing zone criteria.

Installation Information Infrastructure Architecture

Fiber optic cable would be installed from the cantonment area to the ranges, motor pool, and other facilities within the installation. The I3A is necessary for the Army's mission-essential requirements, as well as for connecting to the transformation training locations of the SBCT on the island of Hawai'i. The I3A project could consist of 62,000 feet of underground and aboveground cable that would provide additional links to the facilities and to the range complexes by upgrading the e-mail system, asset visibility system, automated personnel processing system, and video teleconferencing capability.

Construction of Fixed Tactical Internet

A group of vertical whip antennas, strategically placed throughout the installation and training areas, would be constructed. As a result, radios within military vehicles would be able to receive communication signals to process both voice and data. Four antennas would be installed at each proposed site on the island of Hawai'i. Existing tower sites would be used when possible. Two antennas are approximately four feet (1 meter) long and two inches (0.05 meter) in diameter. Two other antennas would be approximately 10 feet (3 meters) long and 2 inches (0.05 meter) in diameter. All would be mounted on antenna masts or existing utility poles, towers, or buildings. Each site area would be 20 feet (6 meters) by 25 feet (7.6 meters), including a 15-foot (5-meter) by 20-foot (6-meter) concrete pad for the support structure and shed. Sites would be accessed via existing roads in all cases. No security lighting would be installed at the sites. Equipment sheds would house two radios and four

batteries. Of the 11 locations evaluated for construction of the FTI antennas on Hawai'i, a maximum of eight will be selected from the locations represented in the EIS. Locations will be chosen based on their suitability for communication logistics and avoidance of environmental concerns, such as cultural and biological resources.

Construction of Training Roads at West PTA

After acquisition of the WPAA parcel is complete, the Army plans to construct about 28 miles (45 km) of gravel training roads on the acquired property. The location of these gravel-training roads is as yet undetermined. The Army will comply with all applicable environmental statutes including, but not limited to, NEPA, the ESA, and the NHPA, in determining the location and potential impacts of these roads before construction. The Army will also consult with adjacent and nearby property owners and other interested parties on the location of the proposed training roads to address and resolve potential air quality and dust concerns.

Land Transactions

Acquisition of West PTA

This proposal is to acquire between 15,000 acres (6,070 hectares) and 23,000 acres (9,308 hectares) of land adjacent to PTA from Richard Smart Trust (Parker Ranch).

If it were to acquire the parcel, the Army would construct about 28 miles of gravel training roads on it, although the location of the roads is as yet undetermined. Construction activity on this parcel would be conducted as described above.

Acquisition of Easement For Military Vehicle Trail, PTA to Kawaihae

This project would require a perpetual easement of approximately 132 acres (53.4 hectares) to construct a 24-foot- (7-meter-) wide gravel road with three-foot- (1 meter-) wide gravel shoulders on both sides that would run from Kawaihae Harbor to PTA. If the proposed trail alignment changes, the Army will negotiate with the property owners on a new alignment and will conduct appropriate analysis and documentation in accordance with NEPA, ESA, and NHPA.

Training

Operation of Anti-Armor Live Fire Training Range

The training at the AALFTR is anticipated to affect up to 750 acres (304 hectares). The proposed range would be used between 180 and 242 days per year. Between 3 and 21 combat vehicles and between 5 and 10 support vehicles would be on-site. Approximately 10 TOW missiles and 23 Javelin missiles would be fired per year.

Operation of BAX

The proposed training at the BAX is anticipated to affect 2,075 acres (840 hectares). The BAX is anticipated to use combat vehicles a maximum of 242 days and a minimum of 180 days a year. Between 5 and 25 combat vehicles and between 5 and 10 support vehicles would be on-site. Although the BAX can support mounted and dismounted CALFEX exercises

priority is given to mounted CALFEXs, since these cannot be conducted at SBMR, limiting opportunities for dismounted exercises. Since the Draft EIS, the training objective features have been updated to include a change from the current inventory of eighteen 105mm howitzers to eighteen 155mm howitzers. The Draft EIS analyzed twelve 155 mm howitzers. The Army has updated the analysis in the Final EIS to address eighteen 155mm howitzers.

General SBCT Training

Transformation activities relevant to this class or type of activity include military training on training lands outside of developed areas (e.g., cantonment areas). Such training would include live- (such as 155mm howitzers) and nonlive-fire, mounted maneuver training on 56,661 acres (22,930 hectares) on PTA and 23,000 acres (9,308 hectares) on WPAA (using vehicles such as the Stryker and HMMWV), and other nonlive-fire military training on foot. Most of the nonlive-fire training by SBCT forces would be similar to that currently being conducted by Light Infantry Brigades. Some training, such as maneuver training, would take place in areas previously not used for training, such as the WPAA. Each major element of the SBCT is composed of a number of smaller units. Individual training activities often consist of section-, team-, squad-, and platoon-sized units operating in a dispersed but coordinated manner.

Training includes establishing and using tactical and logistical operations and administrative centers, as well as smaller more dispersed activities, such as bivouac. As with current force training, exercises would continue to be at the squad through company level, with some opportunities for battalion and above training. All units would train 180 to 240 days per year; SBCT training would likely occur between 140 and 180 of those days.

Field activities, or training exercises, can involve a wide variety of activities, such as vehicle movement, maneuvers, and convoys, foot maneuvers, bivouacking, limited aviation training, and staff training exercises. Field exercises can generally take place in all training areas outside of the designated cantonment areas. Dismounted maneuver training will occur in all suitable areas presently used for foot training and activities will be the same as are currently conducted. No SBCT training is planned for the 1,500 acres of the Multi Purpose Range Complex (MPRC). Currently, trafficable areas available for mounted maneuver training exercises at PTA and WPAA are shown on Figure 2-6.

Proposed Action Impacts

Table 8-1 is a list of environmental impacts by specific SBCT project and resource category. This gives the public and reviewers a more detailed evaluation of impacts deriving from specific SBCT-related actions.

8.1.2 Reduced Land Acquisition

Construction

Construction of QTR2

Most of QTR2 would consist of new construction within Range 8, with some facilities available for modification and reuse.

**Table 8-1
SBCT Project Impacts Under the Proposed Action at PTA**

1391 Project #	SBCT Project Title	Location	Land Use	Visual Resources	Airspace	Air Quality	Noise	Traffic	Water Resources	Geology and Soils	Biological Resources	Cultural Resources	Human Health & Safety Standards	Socioeconomics /EJ	Utilities
57197	Battle Area Complex	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊘	⊘	⊗	⊘	⊙+	⊙+
57183	Anti-armor Live-fire and Tracking Range	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊘	⊘	⊗	⊘	⊙+	⊙+
58273	Construct Military Vehicle Trail, PTA-Kawaihae	Pōhakuloa	⊙	⊘	○	⊙	⊙	⊙+	⊙	⊘	⊘	⊗	⊙	⊙+	⊙
58273	Land Easement for Military Vehicle Trail, PTA-Kawaihae	Pōhakuloa	⊙	○	○	○	○	○	○	○	○	○	○	○	○
57417	Ammunition Storage	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊘	⊘	⊙+	⊙+
57414	Tactical Vehicle Wash Facility	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙+	⊙
57411	West PTA Maneuver Training Area Land Acquisition	Pōhakuloa	⊙+	○	○	○	○	○	○	○	○	○	○	○	○
56994	Range Maintenance Facility	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊘	⊙+	⊙
57408	Runway Upgrade/Extension, Bradshaw AAF	Pōhakuloa	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊘	⊙	⊙+	⊙
N/A	Fixed Tactical Internet	Pōhakuloa	⊙	⊘	○	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙+	○+
N/A	Installation Information Infrastructure Architecture	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙+	○+
N/A	SBCT Training	Pōhakuloa	⊙	⊙	⊙	⊗	⊘	⊙	⊙	⊗	⊗	⊗	⊘	⊙	⊙

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

LEGEND:

- PA = Proposed Action
- RLA = Reduced Land Acquisition
- NA = No Action
- ⊗ = Significant impact
- ⊘ = Significant but mitigable to less than significant impact
- ⊙ = Less than significant
- = No impact
- + = Beneficial impact
- N/A = Not applicable

Reduced Land Acquisition Impacts

Table 8-2 is a list of environmental impacts by specific SBCT project and resource category. This gives the public and reviewers a more detailed evaluation of impacts deriving from specific SBCT-related actions.

8.1.3 Public Comments

Public scoping comments regarding SBCT project activities at PTA focused on potential impacts related to the following:

- Public access to trails and other open space;
- Public hunting and other recreational activities;
- Changes in land use;
- Land use in the coastal zone at Kawaihae Harbor;
- Noise caused by training and helicopters at the Keamuku lands, Waiki'i Ranch, and other locations;
- Cultural resources and traditional practices at Parker Ranch, Kawaihae area, and other places;
- Biological resources, including endangered species living in caves;
- Goats and other animals in relationship to loss of habitat;
- Increase in weedy species and pests;
- Increased risk of wildfires;
- Traffic and public safety on Saddle Road;
- Remediation of hazardous materials and waste in soils and groundwater;
- Erosion and drainage from the training activities;
- Outdoor lighting and impacts on astronomy;
- Flight patterns;
- Water supply needs;
- Traffic on Saddle Road;
- Socioeconomic issues; and
- Fugitive dust from training activities, including wind erosion from disturbed areas.

During the DEIS public comment period, public comments on the SBCT project activities at PTA focused on the following:

- Impacts of increased marine traffic to and from the island of Hawai'i;
- Impacts of dust and noise from increased vehicles on local communities and wildlife;

Table 8-2
SBCCT Project Impacts Under RLA Alternative at PTA

1391 Project #	SBCCT Project Title	Location	Land Use	Visual Resources	Airspace	Air Quality	Noise	Traffic	Water Resources	Geology and Soils	Biological Resources	Cultural Resources	Human Health & Safety Standards	Socioeconomics /EJ	Utilities
PTA															
57197	Battle Area Complex	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊘	⊘	⊗	⊘	⊙+	⊙+
57183	Anti-armor Live-fire and Tracking Range	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊘	⊘	⊗	⊘	⊙+	⊙+
58273	Construct Military Vehicle Trail, PTA-Kawaihae	Pōhakuloa	⊙	⊘	○	⊙	⊙	⊙+	⊙	⊘	⊘	⊗	⊙	⊙+	⊙
58273	Land Easement for Military Vehicle Trail, PTA-Kawaihae	Pōhakuloa	⊙	○	○	○	○	○	○	○	○	○	○	○	○
57417	Ammunition Storage	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊘	⊘	⊙+	⊙+
57414	Tactical Vehicle Wash Facility	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙+	⊙
57411	West PTA Maneuver Training Area Land Acquisition	Pōhakuloa	⊙+	○	○	○	○	○	○	○	○	○	○	○	○
56994	Range Maintenance Facility	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊘	⊙+	⊙
57408	Runway Upgrade/Extension, Bradshaw AAF	Pōhakuloa	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊘	⊙	⊙+	⊙
N/A	Fixed Tactical Internet	Pōhakuloa	⊙	⊘	○	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙+	○+
N/A	Installation Information Infrastructure Architecture	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙+	○+
N/A	SBCCT Training	Pōhakuloa	⊙	⊙	⊙	⊗	⊘	⊙	⊙	⊗	⊗	⊗	⊘	⊙	⊙
57462	Qualification Training Range, QTR2	Pōhakuloa	⊙	⊙	○	⊙	⊙	⊙	⊙	⊘	⊘	⊗	⊘	⊙+	⊙+

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

LEGEND:

- PA = Proposed Action
- RLA = Reduced Land Acquisition
- NA = No Action
- ⊗ = Significant impact
- ⊘ = Significant but mitigable to less than significant impact
- ⊙ = Less than significant
- = No impact
- ⊙+ = Beneficial impact
- N/A = Not applicable

- Impacts on hunting from the runway expansion;
- Impacts on caves;
- Impacts on endangered and threatened species and sensitive habitats;
- Impacts from invasive and nonnative species;
- Impacts from fire;
- Impacts on the local ranches;
- Impacts on marine resources at the harbor;
- Increased erosion from training;
- Impacts from PM₁₀ and fugitive dust;
- Revegetation and reclamation;
- Runoff effects on the marine environment;
- Impacts on cultural resources;
- Socioeconomic impacts on property values;
- Ordnance clean up;
- Impacts from lead in the soils;
- Cleanup after closure;
- Sites of contamination;
- MPRC settlement agreement;
- Hazardous materials and waste impacts, such as asbestos, depleted uranium, lead, and RDX;
- Conversion of agricultural land for trail development;
- Recreational access;
- NPDES permit issues;
- Easement acquisitions;
- Impacts on public services;
- Electrical system capacity;
- Vandalism;
- Water supply impacts;
- Vehicle wash wastewater;
- Impacts on the local unemployed;
- Conflicts between military training and public traffic on the new Saddle Road;
- Funding for public roads;
- Traffic impacts;

- Impacts on visual resources;
- Impacts on the groundwater aquifer;
- Impacts on surface water;
- Damage to wellheads; and
- Impacts from flooding.