
APPENDIX C

MMR LAND USE REQUIREMENTS

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Summarized below are the findings of the *Range and Training Land Program, Land Use Requirement Study, Final Submittal, April 2003*.

Training Area Acreages

Training Area	Unrestricted Maneuver Land	Restricted Maneuver Land	Range Area	Impact Area	Cantonment Area	Total
Schofield Barracks Military Reservation	1,235	4,322	1,506	2,780	1,605	11,448
Wheeler Army Airfield	467	0	0	0	902	1,369
Schofield Barracks East Range	2,223	2,842	0	0	89	5,154
Kawailoa Training Area	5,310	18,038	0	0	0	23,348
Kahuku Training Area	4,569	4,829	0	0	0	9,398
Dillingham Airfield	451	45	0	0	168	664
Makua Military Reservation	1,034	3,156	0	0	0	4,190
Pohakuloa Training Area	19,148	37,513	565	51,000	566	108,792
Total	34,437	70,745	2,071	53,780	3,330	164,363

To calculate the available acre-days, the factors listed below determine the time available:

- Baseline – Assumes 242 training days per year, excludes weekends and holidays;
- Moderate – Assumes 330 training days per year, includes weekend training; and
- Intensive – Assumes 365 training days per year.

The number of available acre-days of training is calculated by multiplying the amount of suitable acreage (34,437 acres) by the number of days to calculate the available acre days. The number of available acre-days for each level of training are:

- Baseline – 8,333,754 acre-days;
- Moderate – 11,364,210 acre-days; and
- Intensive – 12,569,505 acre-days.

Based on calculations using the factors listed in Training Circular 25-1 for the amount of land required to conduct Army Training and Evaluation Program (ARTEP) missions and the number of repetitions required annually to maintain proficiency, the total maneuver area requirement for all Army units in Hawaii is 65,256,639 acre-days. Even using the most intensive training period for available ranges, there is a shortfall of 52,687,134 acre-days for training. Compared to the 25th Infantry Division (Light) and US Army, Hawaii requirement of 60,056,666 acre-days, the most intensive training period would result in a shortfall of 47,487,161 acre-days.

Currently, maneuver training on Oahu is generally limited to Schofield Barracks Military Reservation, Schofield Barracks East Range, Kahuku Training Area, Kawailoa Training Area, and Makua Military Reservation. Each designated training area was analyzed and evaluated according to size, location, and suitability for maneuver training. Some of the areas listed as suitable for maneuver training cannot adequately support units other than light infantry equipped with light vehicles. The total land available and suitable for maneuver training on Oahu is 15,219 acres. The geographic separation of these suitable areas into small, isolated parcels compounds

training management problems and results in less efficient use of available training land on Oahu than if all areas were contiguous. The largest parcel of land on Oahu most suitable for infantry maneuver training at the company level is approximately 4,569 acres in the northern portion of Kahuku Training Area.

Schofield Barracks Military

The Schofield Barracks training area contains 1,235 acres of suitable maneuver land. The maneuver training areas are divided in two separate parcels. The southern parcel is characterized by folded terrain with some steeply sloping defiles cutting the area into several compartments. The vegetation varies from field grasses to tropical forest. This area is suitable for field training of squad and platoon size units, headquarters elements, and service support units. It also includes firing points for mortar and artillery live-fire training. The northern parcel is relatively flat and covered with field grasses and some brush and trees. This area is particularly suitable for field training of headquarters and service support units and for mortar and field artillery unit firing positions. Neither parcel can effectively accommodate battalion or full company-size infantry ARTEP missions because of their relatively small size.

Wheeler Army Airfield

Wheeler Army Airfield includes 1,369 acres of mostly developed areas. The 467 acres of potential maneuver training area are rarely used for that purpose.

Schofield Barracks East Range

The western half of Schofield Barracks East Range has 2,223 acres that are suitable for maneuver training for selected infantry platoon and constrained company ARTEP missions. This area contains several relatively flat, gently sloping grass-, brush-, and tree-covered areas separated by deep, steeply sloped water courses. The eastern half of Schofield Barracks East Range is extremely rugged, undeveloped (no roads), densely forested, and is unsuitable for all but the smallest unit (squad/platoon) foot maneuver training.

Kawailoa Training Area

This is the largest training area on Oahu, with 23,348 acres that include access roads and trails. Land is leased from the Dole Food Company, Kamehameha Schools Bishop Estate, and from Attractions Hawaii. Approximately 5,310 acres are characterized as suitable for company-level maneuver training. Much of this installation is characterized by very deep ravines and dense vegetation, which are not generally suited to company-level light infantry use. In the non-suitable areas, troop deployment is primarily limited to single file, small unit movements on ridgelines.

Kahuku Training Area

Most of the acreage (9,398 acres) is owned by the Army, while 1,150 acres are leased from the State of Hawaii. Situated on the slopes of the northern end of the Koolau mountain range, it is the second largest maneuver training area on the island of Oahu with 9,398 acres of gross maneuver land. Approximately 4,569 acres were determined to be suitable for company-level light maneuver use. The southern (uphill) portion of the area lies adjacent to the Kawailoa Training Area and is characterized by the same rugged, densely vegetated terrain. Only the northern portion of the Kahuku Training Area contains a significant area suitable for unrestricted

light infantry maneuver. This training area varies from rolling grass and brush-covered terrain, with some trees in the northern half, to the extremely rugged area in the south. The entire area is compartmented by several south-to-north oriented gullies. It should be noted that infantry battalions may accomplish ARTEP missions, although in a severely constrained environment. The infantry battalion missions require many more contiguous acres than are available in the Kahuku Training Area to fully incorporate all combat assets that should be exercised in the execution of this mission.

Dillingham Airfield

Of 664 acres, 451 acres are suitable for unrestricted maneuver training. The remaining area is unsuitable for maneuver training and consists of developed areas at the airfield and the slopes of the bordering Waianae mountain range. Only some of the smallest unit ARTEP missions can be supported, although field training for headquarters and service support units can be easily accommodated. The area has extensive hardstand that will support vehicular traffic and headquarters activities. The area is generally flat in the north and slopes up steeply on the south. There is some outlying forest and brush cover.

Makua Military Reservation

Makua Military Reservation is situated in a valley surrounded by steep, sloping sides to the north, east, and south. The climate is fairly dry, especially during the summer months, which enhances range fire problems. The ground cover consists of brush and scrub trees. The area includes 1,034 acres suitable for mounted maneuver, which are generally split into two parcels. The southern parcel can accommodate company-level combined-arms live-fire exercises (CALFEXs). The northern parcel is also suitable for company-level maneuver training. Makua Military Reservation contains a large number of cultural resource sites, endangered Oahu tree snail, and some rare or endangered plants. This has caused the Army to change some range procedures but has not caused, as yet, a significant loss of needed terrain. It is the only training area on the island of Oahu that will currently support both light infantry maneuver and live-fire training at the company level.

Pohakuloa Training Area

The Pohakuloa Training Area is the largest training area in Hawaii (108,792 acres) and contains 19,148 acres suitable for mounted maneuver training. The Army also has an occasional use lease for 23,000 acres at Keamuku, which is contiguous with the western boundary of Pohakuloa Training Area. Most of the Keamuku parcel is suitable for company-level light infantry maneuver training to ARTEP standards. In addition, much of Keamuku is trafficable by tactical wheeled vehicles. Pohakuloa Training Area is relatively flat, except for a few puus (steep, separate hills created by volcanic action) and sparse vegetation. Two northern sections of the training area have been designated as critical habitat for the Palila bird, an endangered species. Limitations on training area in place in the critical habitat and other areas designated as sensitive biological areas. It also contains areas of extremely rough lava flows that are not trafficable by wheeled vehicles and are not suitable for light infantry training to ARTEP standards at or above the company level. The area known as the Multi-Purpose Range Complex (MPRC) consists of 2,131 acres. Due to Endangered Species Act and National Environmental Policy Act issues, it is unlikely that this area will be available for any training uses. The suitable maneuver area at Pohakuloa Training Area (19,148 acres) can accommodate light infantry ARTEP mission

training at the company level, but falls short of the total battalion requirement for the light infantry offense mission (51,397 acres) by 32,249 acres. A portion of the training area is made available for civilian hunting for approximately 50 days per year, in accordance with terms of the lease with the State of Hawaii. Selected hunting returns benefits to the Army by controlling the feral animal population, such as pigs, sheep, and goats. Unless the feral animal population is effectively controlled, rare and endangered plant habitats may be impacted and result in more stringent land use measures. Therefore, regularly scheduled hunting at Pohakuloa Training Area helps preserve habitats for endangered species and enhances Army community relations.