

## 3.2 LAND USE/RECREATION

Land use in Hawai'i has been influenced by changes in both local and international political and economic conditions. The percentage of land owned by the state, the federal government, and large private landowners has decreased since 1970, and the percentage of land owned by small private landowners has increased (Juvik 1998). The range of recreational activities, from surfing and fishing to mountain biking to visiting national monuments, reflects the diversity of resources available to the community and visitors alike. In general, most project activity is within Army installation boundaries. Project areas located outside of the installations include FTI sites within state-designated Conservation District land, acquisition and use of agricultural land (pineapple cultivation and cattle ranch land), and construction of military vehicle trails on agricultural roads or undeveloped areas.

### 3.2.1 Introduction/Region of Influence

The land uses and recreational resources of the affected environment were identified by reviewing the following:

- Military real property master plans provide a framework of facilities management, programming, and design and construction and establish a logical plan for developing military installations (Belt Collins 1993, 1994);
- Integrated Natural Resources Management Plans are comprehensive plans for managing installation resources, including recreation resources (USARHAW and 25th ID [L] 2001a, 2001b);
- The Hawai'i State Plan was prepared to improve the planning process, to increase the effectiveness of government and private actions, to improve coordination among agencies and levels of government, to provide for the wise use of Hawai'i's resources, and to guide the future development of the state (HDBEDT 1991);
- State functional plans set specific objectives and establish policies to implement actions for a particular field of activity;
- State Land Use District designations list all lands in one of four districts: Urban, Agriculture, Conservation, or Rural (State of Hawai'i 2002a). Conservation district subzone designations, regulated by DLNR, are Protective, Limited, Resource, General, and Special;
- The state designations for "Agricultural Lands of Importance to the State of Hawai'i (ALISH) categorize agricultural land as Prime, Unique, or Other (State of Hawai'i 2002a);
- The General Plan for the City and County of Honolulu is a statement of objectives and policies that set forth the long-range aspirations of O'ahu residents and strategies of action to achieve them (City and County of Honolulu 1992);
- The sustainable community plans on O'ahu relevant to the project alternatives are Central O'ahu (City and County of Honolulu 2002a), North Shore (City and County of Honolulu 2000a), and Ko'olau Loa (City and County of Honolulu 2002b);

- Tax map key identifications and property boundaries (City and County of Honolulu 2001; GDSI Hawai'i 2001) (tax map key is defined in this section);
- City and County of Honolulu Land Use Ordinance identifies zoning on O'ahu (City and County of Honolulu 2001);
- County of Hawai'i General Plan is a policy document for the long-range comprehensive development of the island of Hawai'i (County of Hawai'i 1989). The December 2001 draft of the County of Hawai'i General Plan is under review (County of Hawai'i 2001a);
- County of Hawai'i Zoning Code identifies zoning on the island of Hawai'i (County of Hawai'i 2001b); and
- Special Management Area designations and Shoreline Setbacks are designated areas, regulated by the counties, for more intensive management (State of Hawai'i 2002a).

The proposed federal activities are subject to the federal authorities listed in Appendix N, but they are not required to conform to state plans and policies or related land use documents.

The ROI for the land use and recreation analysis is the project area itself. Surrounding land uses are considered when there is a potential conflict with a proposed project. The land use and quality of the recreational experience in a project area may also be indirectly affected through short- or long-term changes in ambient conditions, such as dust and odor, noise, traffic, human health and safety, socioeconomics, public services and utilities, and loss of views; these changes are evaluated in detail in the sections of this document that pertain to them.

### ***Definitions***

**Ceded Land.** Ceded lands were either Crown or government lands until 1893, when the Hawaiian Kingdom was overthrown. The successor government, the Republic of Hawai'i, assumed ownership and control of these lands and continued their public use. When the Republic of Hawai'i was annexed as a territory of the United States in 1898, it ceded these lands to the United States, which took ownership of them in fee simple. During the territorial era, the United States set some of the lands aside for military and other public purposes. When Hawai'i became a state in 1959, the United States retained ownership of the ceded lands it needed for military and public purposes and conveyed the remaining ceded lands to the state.

**Tax Map Key.** A tax map key is the description of a physical land unit of the state, using the division, zone, section, plat, and parcel. It is prepared especially for taxation purposes and in accordance with the requirements of the City and County of Honolulu Real Property Assessment Division and the County of Hawai'i Real Property Tax Division.

### 3.2.2 Resource Overview

#### ***Schofield Barracks Military Reservation/Wheeler Army Airfield***

##### Main Post

Schofield Barracks Main Post totals 11,448 acres (4,633 hectares). The installation master plan identified land uses within the project areas, which include training ranges, ordnance impact area, conservation land, and the cantonment area (Belt Collins 1993). The Main Post includes lands within the state-designated Urban, Agricultural, and Conservation Districts (State of Hawai'i 2002a). Recreational opportunities at the Main Post include the 18-hole Kalākaua golf course, archery, skeet shooting, and hiking (R. M. Towill Corp. 1997a).

Land uses surrounding the Main Post include agriculture, forest, urban, and military. The Ka'ala Natural Area Reserve is northwest of the Main Post, with agricultural land to the north. The town of Wahiawā is east of the Main Post, with WAAF to the southeast. Land to the south of the Main Post includes the military's Field Station Kunia, Del Monte pineapple fields, and the Honouliuli Preserve. Land uses to the west of the Main Post include Naval Magazine Pearl Harbor Lualualei Branch and the Wai'anae Kai Forest Reserve, which includes a remnant native forest (DLNR 2003b).

##### Schofield Barracks East Range

SBER is east of the Main Post and totals 5,154 acres (2,086 hectares). The installation master plan identified land uses at SBER as training, education facilities, the US Army Non-Commissioned Officers Academy, warehouses, and a maintenance facility (Belt Collins 1993). Land uses at the SBER project areas are training, conservation/buffer, and supply/storage (Belt Collins 1993). Training areas at SBER are within the state designated Conservation District Resource and Protective Subzones (State of Hawai'i 2002a). Recreational opportunities at SBER include the 18-hole Leilehua Golf Course and hiking (R. M. Towill Corp. 1997a).

Land uses surrounding SBER include urban, military, forest, and agriculture. The town of Wahiawā is along the northwestern border of SBER. KLOA is along the northeastern border and includes the 'Ewa Forest Reserve. The eastern side of the Ko'olau Mountains and Ahupua'a O Kahana State Park are to the east of SBER. Land south of SBER includes forest, agricultural lands, and Mililani Town.

##### Wheeler Army Airfield

WAAF, a subinstallation of SBMR, consists of 1,369 acres (554 hectares) and provides administration, housing, maintenance, training, and flight facilities for peacetime mission requirement, including security and law enforcement support. The installation master plan identified land uses in the project areas as operations/airfield, supply/storage, community facilities, and training (Belt Collins 1994). WAAF includes lands within the state designated Urban, Agricultural, and Conservation Districts (State of Hawai'i 2002a).

Land uses surrounding WAAF include urban, military, and agriculture. The town of Wahiawā is to the north, and Mililani town is to the east-southeast of WAAF. The Main Post

and Field Station Kunia are to the west of WAAF, and SBER is to the east. Land to the south of WAAF is used for agriculture.

#### South Range Acquisition Area

Under the Proposed Action, the acquisition area would consist of approximately 1,400 acres (567 hectares); under the RLA Alternative, the acquisition area would consist of approximately 100 acres (40 hectares). The SRAA is used for pineapple agriculture and contains state-designated Prime, Unique and Other agricultural lands (State of Hawai'i 2002a).

The Proposed Action configuration includes land within the Conservation District Resource Subzone. This land also encompasses forest reserve land that is included in the Honouliuli Preserve, which is managed by The Nature Conservancy (INC). The preserve includes a hiking trail that is open for monthly interpretive organized hikes and access to TNC work areas (LaPierre 2002).

Land uses surrounding the SRAA include military, agriculture, and forest. The Main Post is to the north, and Field Station Kunia and WAAF are to the east. Land to the south is used for pineapple agriculture, and land to the south and west is forest reserve, which is part of the Honouliuli Preserve.

#### Helemanō Trail

The trail alignment, consisting of 17 acres (27 hectares), uses agricultural roads within state-designated Prime and Other agricultural land (USGS 1999a; State of Hawai'i 2002a).

Land surrounding the Helemanō Trail alignment is military (Main Post) and agricultural.

### ***Dillingham Military Reservation***

#### Dillingham Military Reservation

Land uses at the 664-acre (269-hectare) DMR include an airfield and associated roadways, bunkers, and earthen airplane hangars. Land within the DMR project areas is used for training, with one antenna location outside of DMR, within the state-designated Conservation District Resource Subzone (State of Hawai'i 2002a). Most of DMR is within the state-designated Agricultural District but is not used for agriculture. The Special Management Area includes the airfield portion of DMR (State of Hawai'i 2002a). Public recreation/nonmilitary uses at DMR include glider plane operation, parachuting, skydiving, hang gliding, and hiking.

The land surrounding DMR is generally undeveloped and includes state-designated prime agricultural land to the east and beaches to the north, with some residences to the northeast. The Kawaihāpai reservoir and associated pumping station and aqueducts are east of DMR (USGS 1998c). Land south of DMR is mountainous and includes a state hunting area to the southwest. Land uses to the west include an inactive quarry, the YMCA's Camp Erdman, and the military's Camp Ka'ena.

*Dillingham Trail*

The Dillingham Trail would connect the Main Post and DMR. The trail alignment, consisting of approximately 55 acres (22 hectares), is along agricultural roads and undeveloped lands (USGS 1999a, 1998c). The land surrounding Dillingham Trail is generally agricultural. The trail crosses the Special Management Area as it passes to the north and west of Thomson Corner, a residential subdivision (State of Hawai'i 2002a).

The land surrounding Dillingham Trail is generally agricultural or undeveloped. The trail passes near the residential subdivision Thomson Corner.

*Kahuku Training Area*

KTA consists of 9,398 acres (3,803 hectares) and is used for Army tactical maneuver training, including mountain and jungle warfare, and can support multiple infantry battalion-sized missions. KTA project areas are used for training. Ammunition used on KTA is limited to blanks and pyrotechnics (e.g., smoke and incendiary devices), but no pyrotechnics are allowed in training areas A1 and A3 or within 3,281 feet (1,000 meters) of the KTA borders (Nakata Planning Group, LLC 2002a). There are no ordnance impact areas or SDZs on KTA. About half of KTA lands are within the state-designated Conservation District Resource Subzone, and the remaining lands are within the Agricultural District (State of Hawai'i 2002a). Public recreational use of KTA is primarily hiking, biking (including motocross activities), and hunting in two Army-maintained areas.

Land to the north, east and west of KTA, including land near the coast, is agricultural and includes the town of Waiale'e. Beyond Kamehameha Highway are the Waiale'e Beach Park and the Turtle Bay Resort, Kawela Bay Beach Park, Punamanō National Wildlife Refuge, an aquaculture facility, Kī'i National Wildlife Reserve, the town of Kahuku, Mālaekahana State Recreation Area, La'ie Point County Park, and Brigham Young University. Forest and agricultural land is to the southeast, and KLOA is south and southwest of KTA. Agricultural land is west of KTA, with Pūpūkea Paumalū Forest Reserve, the Pūpūkea Paumalū Homesteads, and Camp Paumalū. Land uses to the northwest of KTA include agriculture, park, and rural communities.

*Kawailoa Training Area*

KLOA consists of 23,348 acres (9,449 hectares) and is used for maneuver, helicopter, and mountain/jungle warfare training. KLOA can support small infantry unit maneuver and helicopter training. Ammunition used at KLOA is limited to blanks; no pyrotechnics or live fire are allowed (Nakata Planning Group, LLC 2002a). The project area at KLOA is used for training. KLOA is included in the state-designated Conservation District Resource and Protective Subzones (Figure 7-3). Most of KLOA is included in the Kawailoa Forest Reserve, and the southern portion of KLOA includes the 'Ewa Forest Reserve. Recreational resources at KLOA include hiking.

Land surrounding KTA is used for military, forest, agricultural, and park land. KTA is north of KLOA. To the east are private land, Kaipapa'u Forest Reserve, Hau'ula Forest Reserve, and Sacred Falls State Park. The eastern side of the Ko'olau Mountains, with the Ahupua'a

O Kahana State Park, are southeast of KLOA. SBER is to the south, and private agricultural lands are to the west.

### Drum Road

Drum Road is a dirt and gravel road from HMR to KTA. The proposed Drum road realignment crosses a state-designated Agricultural District and Conservation District Resource, General, and Limited Subzones (State of Hawai'i 2002a). The alignment also crosses portions of the state's Prime agricultural land, but most of this alignment is on existing roads (State of Hawai'i 2002a). The northern portion of Drum Road is within the Special Management Area (State of Hawai'i 2002a).

Land uses surrounding Drum Road are Open and Forested Areas, Agriculture, and Military/Federal (City and County of Honolulu 2000a).

### ***Pōhakuloa Training Area***

#### Pōhakuloa Training Area

PTA is the largest Army training area in Hawai'i, totaling 108,792 acres (44,028 hectares). Land uses within project areas at PTA include training ranges, an ordnance impact area, the cantonment area, and BAAF. Land uses within project areas outside of PTA include agriculture, forest reserve, and urban (Kawaihae Harbor). PTA lands are within the Conservation District General, Limited, and Resource Subzones (State of Hawai'i 2002a). Recreation at PTA includes archery, biking, motor sports, and hunting, which is coordinated with the state (R.M. Towill Corp. 1997a).

Land uses surrounding PTA include cattle grazing, game management, forest reserves, and undeveloped land. Land to the northwest of PTA is agricultural and is primarily used for cattle grazing and also provides limited hunting opportunities for big game species and game birds. Parker Ranch manages the WPAA hunting lands. Land to the north of PTA includes the Ka'ōhe Game Management Area, Mauna Kea State Park, and Mauna Kea Forest Reserve. Land to the east and south is included in the Mauna Loa Forest Reserve.

#### West PTA Acquisition Area

The proposed WPAA, consisting of approximately 23,000 acres (37,007 hectares), is used for cattle grazing, limited hunting, occasional military maneuver training, and a quarry. The WPAA is state designated as Other Agricultural Land (State of Hawai'i 2002b). The WPAA is a hunting area managed by Parker Ranch.

Land uses surrounding the WPAA include cattle grazing, military training, agriculture, residential lots, and open space. PTA is to the south-southeast of the area, and the Pu'u Pā Military Maneuver Area is adjacent to the northern tip, west of Māmalahoa Highway. The remaining surrounding lands are used for recreation and ranching or are undeveloped.

According to the USACE, the overall ordnance and explosives hazard level for the WPAA is low (Earth Tech 2002). Prior to accessing the parcel, a waiver must be signed acknowledging the UXO hazards. The institutional controls for these low risk areas include community

awareness outreach programs, educational media, and pre-coordinated construction support. UXO hazards along the Saddle Road corridor (extending approximately 164 feet [50 meters] from the road) need to be cleared to a safe depth to support the heaviest track and wheeled vehicle that will use the area.

#### *Pōhakuloa Training Area Trail*

PTA Trail would include approximately 109 acres (44 hectares) of land between PTA and Kawaihae Harbor. Land uses within the proposed military vehicle trail corridor include cattle grazing, agriculture, periodic military training, open space, utility easements, a portion of a former military vehicle trail, and Kawaihae Harbor. PTA Trail land is mostly agriculture, with urban areas at and near Kawaihae Harbor. The southern portion of the proposed military vehicle trail is designated as Other Agricultural Land (State of Hawai'i 2002a). The trail alignment near Kawaihae Harbor is included in the Special Management Area (County of Hawai'i 2001b). There is also a shoreline setback along the harbor property. The southern portion of the PTA Trail crosses the Parker Ranch-managed hunting area, located within the WPAA.

Land uses surrounding the proposed military vehicle trail include cattle grazing, residential (Waikoloa Village and Kawaihae Village), Pu'ukoholā Heiau National Historic Site, agriculture, agricultural subdivision, open space, and periodic military training.

According to USACE, the ordnance and explosives hazard level for the PTA Trail alignment ranges from low to high, and the policy regarding use of roads and trails primarily depends on landowners and current land use (Earth Tech 2002; Streck 2003). The institutional controls for these areas include community awareness outreach programs, educational media, and coordinated construction support. This UXO cleanup project is addressed in Chapter 9, under Cumulative Impacts.