

2.1. GENERAL OVERVIEW.

a. Fires ignited from any source, including ammunition or military weapons systems, can alter the many components, structures, and processes of the Hawaiian ecosystem. The 'fire regime' is a measure of fire size, frequency, seasonality, intensity, and severity. Size and frequency combine to determine the proportion of the landscape touched by fire. Seasonality determines how fire interacts with the environment. Intensity and severity are defined by fire behavior and influence the after-effects, such as tree mortality, ground char, and seedling success. Fires can have dramatic effects across broad landscapes, or minimal impact in a small area. They can accelerate or retard the succession of seral stages, increase or reduce nutrient availability, and alter an ecosystem's physical structure. Whatever the impact, every fire is unique, and every fire contains considerable variability within its bounds.

b. The natural fire regime in Hawaii can be best described as low frequency and low severity. Few natural sources of ignition exist, natural fuel beds are often discontinuous, and the majority of the islands receive moderate to high levels of precipitation. In the past 100 years, invasion of alien vegetation has altered Hawaiian ecosystems dramatically, resulting in highly fire prone areas. Activities associated with military training increase the risk of unplanned fire ignitions through the use of ammunition and pyrotechnics. As alien grasses and their associated high frequency, higher severity fire regimes have modified the natural ecosystem, they have degraded the remaining native ecosystems and the small colonies of threatened and endangered species found therein. The spread and intensification of alien grasses increases the probability and frequency of fires. Native plants, not well adapted to intense and frequent fires, are easily outcompeted by their aggressive alien counterparts. As a result, fire in native habitats almost always converts native woodlands and forests to alien dominated savannas and grasslands, destroying the local biota.

2.2. EFFECTS ON MILITARY TRAINING.

Fire does not only affect ecosystems. It also affects the military's ability to accomplish its mission:

a. Endangerment to the Lives of Soldiers. Soldiers training in the field are normally on foot and have limited access to transportation. Fires that are driven by high winds could easily overtake soldiers, trapping them and ultimately causing injury or death.

b. Explosive Hazards. The explosive hazards inherent in military training in the field are multiplied when exposed to wildfire. Normal and unexploded ordnance on the ranges and in the training areas creates extremely hazardous conditions to personnel when they are in close proximity to a fire.

c. Loss of Access. Fires on Army land result in a loss of access to training areas and ranges either during or after a fire. When notified of a wildfire, Range Control will call for a cease-fire and close that particular range or training area. If the fire is out of control, adjacent areas may require evacuation as well.

d. Disruption of Training Schedules. Cease-fire and closures of ranges/training areas due to wildfires create a ripple effect from the range scheduling office down to the training unit. Rescheduling an area cannot always be accomplished within a unit's required time frame.

e. Destruction of Targets/Control Systems. Wildfire damage to electronic targets and associated control systems on live-fire range complexes can be extremely costly. The time necessary to repair these systems causes the loss of valuable training opportunities.

f. Destruction of Vegetation. Vegetation is used by the Army for cover, concealment and camouflage. Without this vegetation, training in the art of camouflage and concealment is rendered difficult or impossible. The absence of vegetation also promotes erosion, which in turn reduces trafficability and creates unsafe driving conditions during inclement weather.

g. Costs. Wildfires can be costly and impose damages that siphon off training funds. Damage to off-base resources also represent both economic and political costs. In Hawaii, tremendous resources are earmarked for conservation actions, due in large part to the damages caused by training related wildfires.

2.3. VALUES TO BE PROTECTED.

The values to be protected on Army training lands from wildfires include personnel safety, built up improvements (structures, electronic weaponry, and targets), high value natural resources such as Biological Sensitive Areas (BSA) and Sensitive Ecological Areas (SEA), and cultural resources. Priority protection is described for each FMA in Chapter 7 and the SOP for the FMA (See Appendix 1, SOPs for figures specific to each installation).

2.3.1. Personnel Safety. The primary concern during any fire is human safety and protection. For example, Schofield Barracks and Wheeler Army Airfield have a daytime population of over 50,000 people, including military and civilian staff and dependents. Neighboring towns and industrial areas provide additional priority protection considerations. Additionally, firefighters on the line, in the air, and at the command post must all be properly trained, outfitted, and informed of all threats and safety measures.

2.3.2. Structures and Infrastructure. All Army lands in Hawaii are associated with cantonment or built up improved areas. Schofield Barracks alone includes over 5,000 buildings, electronic training equipment, and military family housing units, with a total land and improvement value of well over \$1 billion. In addition, there are tens of millions of dollars worth of equipment located on the training areas within high fire hazard vegetation.

2.3.3. Natural/Cultural Resources. There are many endangered species and archaeological sites found on Army training lands in Hawaii. The Army is committed to conserve, protect, and enhance these natural and cultural resources. Some training areas contain extremely significant concentrations of endangered species. While military training related factors such as munitions-caused fires may threaten the survival of certain endangered species, many species are also threatened by factors not related to military activities such as ungulate and carnivore predation, competition from alien species, and disease.

2.4. WILDLAND FIRE FIGHTING RESOURCES.

2.4.1. Federal Fire Department. Fire protection services on USARHAW installations on Oahu are provided by the consolidated Federal Fire Department (FFD) and Navy Region Hawaii through an Interservice Support Agreement (ISA). Fire protection services have generally been built around the structural fire department concept. In the past, wildland fire fighting has been a secondary function and has been the least planned and financed. The FFD has historically only been staffed to carry out the structural and/or airfield fire fighting missions on Army installations. The FFD will support USARHAW in the suppression of wildland fires on Army lands through the supply of trained personnel and equipment. Coordination and cooperation between FFD and Army firefighters are essential to the success of this IWFMP.

2.4.2. Pohakuloa Training Area Fire Department.

a. The PTA Fire Department currently provides fire protection services at PTA. The PTA Deputy Fire Chief is responsible to ensure that wildland fire response requirements at PTA are in accordance with this IWFMP, Army Regulations (AR 420-90), and Department of Defense Instruction (DoDI) 6055.6, Fire Protection Program.

b. An additional position will be added to the PTA Fire Department. This is the PTA Wildland Fire Coordinator who will work closely with the Wildland Fire Program Manager to facilitate pre-suppression actions on the Big Island and who will also assist in the fire fighting duties of the PTA Fire Department.

2.4.3. IFSO, Strike Team. The IFSO will acquire a ten person strike team that will eventually take over the responsibility of initial attack and first responders. This is currently handled by Range Control personnel (see below) who are trained for wildland fire fighting, but whose primary duties may conflict with fire suppression efforts. In order to remedy this situation and to give the IFSO Wildland Fire Program Manager direct oversight of fire fighting personnel, the IFSO will secure funding for staffing this strike team starting in FY05. The strike team will provide services beyond initial and extended attack including providing labor for fuels management, firebreak and fuelbreak maintenance, prescribed fire, and other labor intensive tasks; maintenance of RAWs, fire records, and analysis of fire records for trends; upkeep of fire fighting equipment including Bambi fire buckets, hummers, and water tenders; and other tasks determined at the discretion of the Wildland Fire Program Manager.

2.4.4. G3/DPTM, Range Division Hawaii, Auxiliary Wildland Fire fighting Force. An auxiliary wildland fire fighting force is established on Oahu and PTA to provide initial attack and to augment the PTA Army Fire Department (PTA FD) and FFD during wildfires. PTA Fire Department and FFD response times vary greatly depending upon the location of the closest fire station in relationship to the FMA. An auxiliary wildland fire fighting force from G3/DPTM, Range Division Hawaii (Range Control) is assigned as first responders to perform initial attack on range fires to minimize impacts. Upon notification or detection of a fire on the range, immediate deployment of Range Control personnel can help to suppress fires at the point of origin while fires are still small and prevent them from spreading. Initial attack by Range Control personnel will limit fire growth until the PTA Fire Department or FFD arrives on the scene, at which point Range Control personnel will then be available to complement their fire fighting efforts or return to their duty stations as the situation allows. Policy requires that all Range Control personnel engaged in fire suppression and prescribed fire duties meet the National

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Wildland Coordinating Group (NWCG) standards referred to in this plan and the Department of the Army (DA) Wildland Fire Policy Guidance. Initial attack responsibilities will be transferred to the IFSO Strike Team in FY 05, provided the strike team is fully funded and staffed.

2.4.5. Outside Agencies.

a. Unlike mainland wildfire operations where resources can be pulled from all over the country, resources in Hawaii are limited to those found on each island. However, there are several outside agencies that will assist the Army with wildfire suppression through mutual aid agreements. These agencies are:

1. City and County of Honolulu Fire Department, (Island of Oahu).
2. Hawaii County Fire Department, (Island of Hawaii).
3. State of Hawaii, Division of Forestry and Wildlife (DOFAW), (Island of Oahu and Hawaii).
4. National Park Service, Hawaii Volcanoes National Park, (Island of Hawaii).
5. U.S. Air Force at Hickam Air Force Base (AFB), (Island of Oahu).

b. Interagency agreements and/or cooperative agreements must be established and periodically reviewed for currency.