

Appendix 7 MMR Keawaula Post Fire Survey

MMR Keawa`ula Post Fire Survey
September 11, 2003

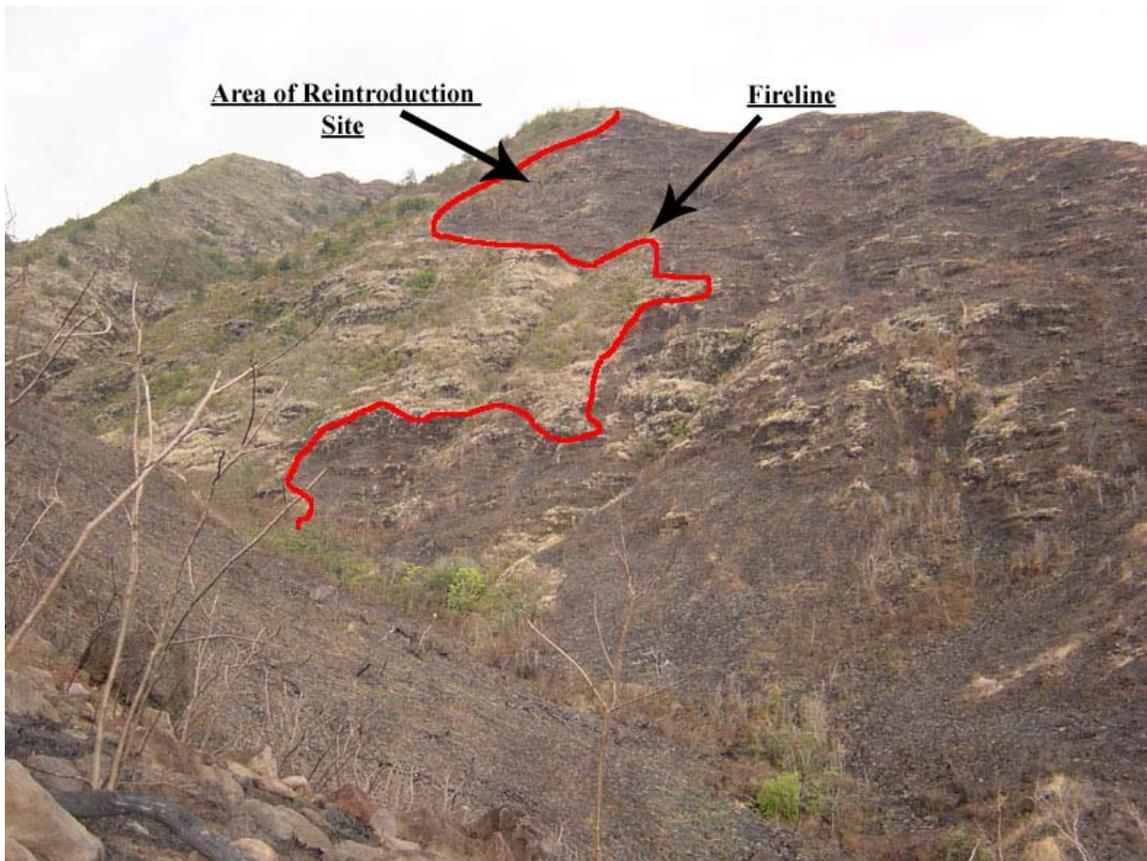
APVG-GWV (200-3)

15 September 2003

MEMORANDUM FOR RECORD

SUBJECT: Reconnaissance for Fire burning into Makua Military Reservation, started on 8/15/03 in the Keawa`ula area, north of Makua Valley.

1. On 11 September 2003, Naomi Arcand and Lasha-Lynn Salbosa surveyed an area damaged by a fire that burned into Makua Military Reservation (MMR) on 15 August 2003. The purpose of the follow up survey was to generate an exact map of the fires' extent and to assess impacts to a reintroduction site of federally listed plant species.
2. A map showing the extent of the fire is attached. A total of 675 acres burned (enclosure 1.) The fire started near the entrance to Keawa`ula Beach Park on Farrington Highway. The cause of the fire was determined to be arson.



View from Keawa`ula Beach Park looking up at Puaakanoa Ridge, which borders Makua Valley Military Reservation. The reintroduction site of *H. brackenridgei* subsp. *mokuleianus* lies just within the fireline.

4.



Outplanting site of *H. brackenridgei*, marked with a flagged pole. Although the fire did not engulf the entire reintroduction site, at least 90 percent of the site suffered from considerable heat damage.



Reintroduction site near Kaluakauila fenceline damaged by fire. Approximately 250 meters of fenceline was damaged in the fire and may subsequently need to be replaced.

5. In addition to impacting the reintroduction site of *H. brackenridgei* subsp. *mokuleianus*, planted 10 December 2002, a number of other native plant species were also burned. See below for a partial list of native and alien species surveyed. In addition, under-story species were burned but not documented due to unidentifiable charred remains.

Native Plant Species	Alien Plant Species
<i>Diospyros sandwicensis</i>	<i>Leucaena leucocephala</i>
<i>Santalum ellipticum</i>	<i>Panicum maximum</i>
<i>Hibiscus brackenridgei</i> subsp. <i>mokuleianus</i>	<i>Grevillia robusta</i>
<i>Dodonaea viscosa</i>	<i>Melinis minutiflora</i>
<i>Erythrina sandwicensis</i>	
<i>Sida fallax</i>	
<i>Bydrax odoratum</i>	

5.



View looking down at Keawa'ula Beach Park from the reintroduction site outside the fire line. *P. maximum* and *L. leucocephala* dominate much of this area through which the Kuaokala Road bisects. The fire line burned down to the beach stopping only by the roads' edge.

6. POC is the undersigned, 656-7641/7741.

Encl

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