



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
 Stream Protection and Management Branch

FIELD INVESTIGATION REPORT
FI2008120904 (East Maui, Kualani)

Date of Field Investigation:	December 9, 2008	Time (24-hour):	1600 - 1720
CWRM Staff:	Ken Kawahara, Ed Sakoda, Dean Uyeno, and Chui Ling Cheng		
Individuals Present:	EMI - Garret Hew (Water Resources Manager), Mark Vaught (Operations Manager), Henry Robello (Field Superintendent);		
Hydrologic Unit:	Waiokamilo (6055)		
Stream Name:	Kualani Stream		

Findings:

The purpose of this field visit was to locate Kualani Stream, tributary of Waiokamilo Stream, near Koolau Ditch. CWRM staff had a GPS unit to pinpoint their location in relation to the ditch, service road, and the stream. Waypoints taken during this field visit were compared to those taken at Kualani Stream near Hana Highway and the Lakini taro patch in the downstream areas (refer to FI2008111803). The goal was to map out Kualani Stream from the headwaters to its confluence with Waiokamilo Stream, and to verify whether Kualani Stream was diverted at Koolau Ditch.

Kualani Stream crosses the service road approximately 1,100 feet west of West Wailuanui Stream. Upstream of the service road, Kualani Stream is a small waterfall and drops into a pond. The stream continues to flow downstream under the road. In order to access Kualani Stream above the waterfall, CWRM staff drove another 1,000 feet further west on the service road and began to hike into the forest in search of the stream. Staff hiked mauka for about 1,000 feet and then headed east for another 600 feet. The GPS unit indicated that staff were hiking above and parallel to the Koolau Ditch tunnel. Staff reached a deep gulch and found a stream below. Staff originally thought that the stream was Kualani Stream but later confirmed that it was West Wailuanui Stream. Staff headed West and then makai for 600 feet until reaching a slope. After hiking 100 feet down the steep slope, the terrain flattens out and water was seen seeping into a small streambed. Staff concluded that it was the headwaters of Kualani Stream. Staff continued to hike downstream for 300 feet, and then veered east into the forest and back on the service road. From there, staff hiked on the road to return to their vehicles.

Back in the Honolulu Office, CWRM staff plotted the waypoints taken with the GPS unit during the hike against the USGS quad map, Koolau Ditch, and the stream layer. Based on the map, the headwaters of Kualani Stream begins 650 feet makai of Koolau Ditch. Since Kualani Stream begins below Koolau Ditch, the stream is not diverted at the ditch. According to the photos taken earlier of the Koolau Ditch diversions on Waiokamilo Stream (refer to FI2008120903), the stream that is formerly believed to be Kualani Stream is actually a tributary of East Waiokamilo Stream. With the coordinates taken in this field visit, CWRM staff plans to re-evaluate the geographic location of the stream and possibly create a new GIS layer of this stream.

Staff concluded the field visit at 1720 hours.

Image Listing: (Attach PDF of image contact sheet)

File Name:	Brief Description:
20081209106	Small waterfall in Kualani Stream at the service road.
20081209107	Small waterfall in Kualani Stream at the service road.
20081209108	Small waterfall in Kualani Stream at the service road.
20081209109	Small waterfall in Kualani Stream at the service road.
20081209110	The brush that CWRM staff hiked through to locate Kualani Stream.
20081209111	The brush that CWRM staff hiked through to locate Kualani Stream.
20081209112	Headwaters of Kualani Stream, 650 feet makai of Koolau Ditch.
20081209113	Headwaters of Kualani Stream, 650 feet makai of Koolau Ditch.

GPS Listing:

Shapefiles: (List file names of all shapefiles created and a brief description of each)

File Name: East_Maui_POI.shp	Brief Description: Points of interest (POI) recorded with the GPS unit during the field visit. The file includes POI recorded from all the East Maui field investigations.
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Waypoints: (List all waypoints in decimal degrees and provide a brief description of each)

WP No.	Latitude	Longitude	Brief Description:
77	20.827438	-156.144607	Kualani Stream at EMI Service Road
78	20.826859	-156.144668	Kualani Stream
79	20.826648	-156.144803	Kualani Stream
80	20.826139	-156.144918	Kualani Stream, seepage begins to appear
81	20.824898	-156.14587	Kualani Stream, approx. over Koolau Ditch

Attachments:

Brief Description:
1. Image Contact Sheet

Recommendations:

IMAGE CONTACT SHEET



20081209106.JPG



20081209107.JPG



20081209108.JPG



20081209109.JPG



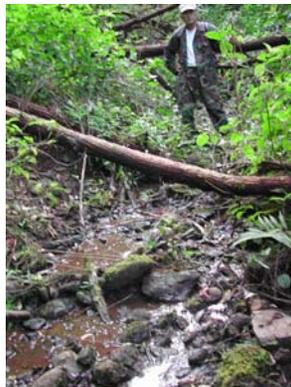
20081209110.JPG



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