



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

FIELD INVESTIGATION REPORT
FI2008121005 (East Maui, Piinaau Koolau Ditch)

Date of Field Investigation:	December 10, 2008	Time (24-hour):	1630 - 1700
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); DOCARE - 3 officers		
Hydrologic Unit:	Piinaau (6053)		
Stream Name:	Piinaau Stream		

Findings:

The purpose of this field visit was to document the Koolau Ditch major and minor diversion intakes on Piinaau Stream. At 1630, CWRM staff, EMI staff, and DOCARE officers arrived at bridge where Piinaau Stream crosses the service road. Approximately a 0.25 miles further west on the service road, the landslide that occurred in 2003 covered the road and a relatively long stretch of Piinaau Stream.

Downstream from Koolau Ditch, Piinaau Stream was dry. Upstream from the ditch, the stream was relatively dry with ponded water. Remnants of an old bridge still exist in the middle of the stream about 100 feet upstream of the ditch. Staff hiked up the left bank of the stream and passed the outfall of a minor diversion (K-31a) that transports water around a losing reach of the stream. The minor diversion is a 6-inch steel and PVC pipe that begins further upstream, diverts water around a losing reach, and drops the water back in the stream near Koolau Ditch. From the minor diversion intake, staff hiked 100 feet downstream in the losing reach where the stream drops into a pond. Garret Hew suspects that the pond could possibly be a sink hole.

The major diversion intake (K-31) is directly below the bridge where Piinaau Stream crosses the service road. The intake is concrete with a metal grate. When the stream is full, water is ponded in front of the grate. When the level of the water reaches a specific height, the water will spill into the ditch through the metal grate.

Staff left concluded the field visit at 1700 hours.

Image Listing: (Attach PDF of image contact sheet)

File Name:	Brief Description:
20081210079	The 2003 landslide that covered the service road (Piinaau Road) and a section of Piinaau Stream in the valley.
20081210080	Keanae valley below Koolau Ditch.
20081210081	Section of Piinaau Stream covered by the 2003 landslide.
20081210082	Piinaau Stream upstream from Koolau Ditch.
20081210084	Outfall of minor diversion (K-31a) that transports water around the losing reach, from upstream reaches to Piinaau Stream immediately upstream of the ditch.
20081210085	Piinaau Stream upstream of minor diversion (K-31a).
20081210086	Minor diversion (K-31a) on Piinaau Stream. Six inch steel and PVC pipe diversion to main Piinaau Stream intake.
20081210088	Piinaau Stream (losing reach) downstream of minor diversion (K-31a).
20081210090	Piinaau Stream (losing reach) downstream of minor diversion (K-31a).
20081210091	Possibly a sink hole on Piinaau Stream, downstream of minor diversion (K-31a).
20081210092	Minor diversion (K-31a) on Piinaau Stream. Six inch steel and PVC pipe diversion to main Piinaau Stream intake.
20081210093	Koolau Ditch intake structure on the right bank of Piinaau Stream.
20081210095	Section of Piinaau Stream covered by the 2003 landslide.

GPS Listing:

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

<u>File Name:</u> East_Maui_POI.shp	<u>Brief Description:</u> 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)

<u>WP No.</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Brief Description:</u>
75	20.828528	-156.174357	EMI Diversion Intake K-31 on Piinaau Stream
76	20.827211	-156.17516	EMI Diversion Intake K-31a on Piinaau Stream
82	20.828305	-156.174906	Outflow from Intake K-31a to Piinaau Stream

Attachments:

Brief Description:
1. Image Contact Sheet

Recommendations:

IMAGE CONTACT SHEET



20081210079.JPG



20081210080.JPG



20081210081.JPG



20081210082.JPG



20081210084.JPG



20081210085.JPG



20081210086.JPG



20081210088.JPG



20081210090.JPG



20081210091.JPG



20081210092.JPG



20081210093.JPG

IMAGE CONTACT SHEET



20081210095.JPG