



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

**FIELD INVESTIGATION REPORT**  
**FI2008111805 (East Maui, Palauhulu, high flow)**

<b>Date of Field Investigation:</b>	November 18, 2008	<b>Time (24-hour):</b>	1540-1600
<b>CWRM Staff:</b>	Ed Sakoda, Dean Uyeno, and Chui Ling Cheng		
<b>Individuals Present:</b>	Skippy Hau (DAR)		
<b>Hydrologic Unit:</b>	Piinaau (6053)		
<b>Stream Name:</b>	Palauhulu Stream		

**Findings:**

At 1540 hours, CWRM staff and Skippy arrived at the Keanae Valley Lookout. From the lookout, staff could view Keanae Flume, Palauhulu Stream, and the large pond before flowing out to the ocean. During the field visit on Oct. 24, 2008 (refer to FI2008102403), Palauhulu Stream downstream from Keanae Flume was completely dry. No water was flowing into the large pond further downstream. At this field visit, the water level in Palauhulu Stream was at least 5 feet high based on the concrete base of the flume. Water was flowing into the large pond. Due to the heavy rain\*, the high flows flushed debris and other contaminants out to the ocean, creating a large plume.

CWRM staff and Skippy then drove to the Hana Highway bridge that crosses Palauhulu Stream. Staff observed Palauhulu Stream from the bridge and determined the flow velocities in the stream to be too high for taking measurements.

Staff left Palauhulu Stream at 1600 hours. While driving to Honopou, staff took photographs of the highs flows in streams that cross Hana Highway. Refer to Field Investigation Report FI2008111806 (East Maui, High flows) for more information.

\*Heavy rain fell on East Maui on the morning of Nov. 18. USGS rain gage (Station 204916156083701) in West Wailuaiki near Keanae recorded 1.8 inches of rain on Nov 18, and 0.82 inches on Nov. 19. Most of the rain fell on the early morning of Nov. 18, between 12AM and 3:30AM. The nearest USGS active streamgage with real-time data is located on West Wailuaiki Stream (Station 16518000). At approximately 12:00AM on Nov. 18, discharge in West Wailuaiki Stream began to increase from 2.7CFS to a peak flow of 2,010 CFS at 9:45AM. By Nov. 26, streamflow returned to 3.7 CFS. Refer to FI2008111801 (East Maui, Palauhulu, high flow) for real-time rainfall and discharge graphs.

**Image Listing:** (Attach PDF of image contact sheet)

<u>File Name:</u>	<u>Brief Description:</u>
20081118086	Palauhulu Stream and Keanae Flume from the Keanae Valley Lookout.
20081118088	Mouth of Piinaau Stream.
20081118091	Keanae Valley taro patches.
20081118093	Palauhulu Stream upstream from Hana Highway.
20081118094	IIFS Site B on Palauhulu Stream upstream from Hana Highway.
20081118095	Palauhulu Stream downstream from Hana Highway.
20081118096	Palauhulu Stream downstream from Hana Highway.

**GPS Listing:**

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

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

**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>
26	20.856333	-156.146474	IIFS Site B on Palauhulu Stream at Hana Highway

**Attachments:**

**Brief Description:**

1. Image Contact Sheet

**Recommendations:**

# IMAGE CONTACT SHEET



**20081118086.JPG**



**20081118088.JPG**



**20081118091.JPG**



**20081118093.JPG**



**20081118094.JPG**



**20081118095.JPG**



**20081118096.JPG**