



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

**FIELD INVESTIGATION REPORT**  
**FI2009021005 (East Maui, Waiokamilo Stream)**

<b>Date of Field Investigation:</b>	February 10, 2009	<b>Time (24-hour):</b>	1400 - 1600
<b>CWRM Staff:</b>	Ed Sakoda, Dean Uyeno, Ronnie Torres, and Chui Ling Cheng		
<b>Individuals Present:</b>	Isaac Kanoa, Gladys Kanoa		
<b>Hydrologic Unit:</b>	Piinaau (6053), Waiokamilo (6055)		
<b>Stream Name:</b>	Piinaau Stream, Palauhulu Stream, Waiokamilo Stream		

**Findings:**

The purpose of this field visit was, in part, to familiarize Ronnie Torres, Geologist of CWRM's Survey Branch, with the conditions of Piinaau Stream, Palauhulu Stream, and Waiokamilo Stream near Dam 3. At 1400 hours, staff met with Isaac and Gladys Kanoa at their residence. Isaac Kanoa led staff to the junction of Palauhulu and Piinaau Streams. Both streams were flowing.

Thereafter, Gladys Kanoa and staff visited Dam 3 on Waiokamilo Stream. Compared to the conditions observed during last year's field visits, the stream channel at the downstream end of the USGS gage pool at Dam 3 was observed to be wider during this field visit. This could be the result of high flows from heavy rains that occurred throughout the months of November to January.

From Dam 3, Gladys Kanoa and staff hiked upstream to a losing section where water from Waiokamilo Stream flows into a pond and disappears underground. It is unknown where that water returns to the surface, if at all. Originally, staff planned to measure the amount of streamflow gained from blocking the flow into this losing section by creating a small temporary dam upstream. However, staff discovered another location where the stream leaked quite a large amount of flow into this losing section (see image 20090210074). This leak was not observed during the previous field visits. Due to the multiple leakages observed, staff was unable to measure the amount of flow gained from diverting water away from the losing section upstream from Dam 3.

Staff continued to hike upstream on Waiokamilo Stream for about 400 feet to a large pond. According to Gladys Kanoa, water from this pond used to split into two branches. Facing mauka, the water from the pond currently flows to the right branch. The left branch was completely blocked by gravel, trees, and other debris (see images 20090210090 and 20090210092).

Last stop was Dam 2 where Gladys Kanoa briefly explained the purpose of the dam.

Staff left Waiokamilo Stream at 1600 hours, and continued to Keanae Arboretum. Refer to Field Investigation Report FI2009021006 (East Maui, Keanae Arboretum) for more information.

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

<b>File Name:</b>	<b>Brief Description:</b>
20090210069	Dam 3 on Waiokamilo Stream.
20090210071	Waiokamilo Stream upstream of Dam 3.
20090210072	USGS gaging station gage pool at dam 3 on Waiokamilo Stream.
20090210073	Losing section upstream from Dam 3 on Waiokamilo Stream.
20090210074	Where the stream leaks into the losing section upstream from Dam 3 on Waiokamilo Stream.
20090210083	Waiokamilo Stream upstream of the losing section upstream from Dam 3 on Waiokamilo Stream.
20090210085	Large pond about 400 feet upstream of Dam 3 on Waiokamilo Stream.
20090210090	Location where the large pond (see image 2009021085) flows into two branches of Waiokamilo Stream.
20090210092	Location where the large pond (see image 2009021085) flows into two branches of Waiokamilo Stream.

**GPS Listing:**

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

<u><b>File Name:</b></u>	<u><b>Brief Description:</b></u>
--------------------------	----------------------------------

**Waypoints:** (List all waypoints in decimal degrees and provide a brief description of each)

<u><b>WP No.</b></u>	<u><b>Latitude</b></u>	<u><b>Longitude</b></u>	<u><b>Brief Description:</b></u>
----------------------	------------------------	-------------------------	----------------------------------

**Attachments:**

**Brief Description:**

1. Image Contact Sheet

**Recommendations:**

# IMAGE CONTACT SHEET



**20090210069.jpg**



**20090210071.jpg**



**20090210072.jpg**



**20090210073.jpg**



**20090210074.jpg**



**20090210083.jpg**



**20090210085.jpg**



**20090210090.jpg**



**20090210092.jpg**