



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

FIELD INVESTIGATION REPORT

FI2008102703 (East Maui, Honopou Haiku Ditch, restore)

Date of Field Investigation:	October 27, 2008	Time (24-hour):	1200 - 1300
CWRM Staff:	Ed Sakoda, Dean Uyeno, and Chui Ling Cheng		
Individuals Present:	Carl Freedman (Consultant at haiku Design & Analysis); EMI - Garret Hew (Water Resources Manager), Mark Vaught (Operations Manager), Henry Robello (Field Superintendent), Nelson Akiu (Keanae Supervisor), Walter Andrade (Field Crew), and Jacob Tamsing (Field Crew); Honopou community - Lynn Scott, Beatrice Kekahuna, Sanford Kekahuna, Boni Kekahuna, and Wanda Vierra		
Hydrologic Unit:	Honopou (6034)		
Stream Name:	Honopou Stream		
Findings:	<p>At approximately 1200 hours, CWRM staff met with Carl Freedman, Garret Hew and EMI staff, and members of the Honopou community at the Haiku Ditch diversion on Honopou Stream. While the EMI Field Crew went to gather banana leaves and other tools for building of the berm wall, CWRM staff took a volumetric measurement of the water flowing through the three 4-inch (O.D.) PVC pipes that bypasses the ditch. With a stopwatch, staff recorded the number of seconds each of the pipes took to fill a 2 gallon bucket. This process was repeated 5 times, making a total of 5 measurements per pipe. As computed back in the Honolulu Office, the flow from the pipes was 0.130 cubic feet per second (0.084 million gallons per day).</p> <p>The goal was to build a berm on the lip of the Haiku Ditch diversion grating structure on Honopou Stream. EMI staff began by placing banana stalks on the upstream edge of the ditch intake structure. With the help of Sanford Kekahuna, EMI staff piled large boulders on top of the leaves. The boulders were taken from Honopou Stream upstream and downstream of Haiku Ditch. The purpose of the banana stalks was to minimize seepage of stream water between the boulders when the water level in the stream rises over the ditch. This way, more water could potentially be pushed through the three 4-inch bypass pipes.</p> <p>CWRM staff videotaped this event.</p> <p>Staff crew left the Haiku Ditch diversion on Honopou Stream at approximately 1300 hours, and continued further upstream to document flow restoration at Lowrie Ditch on Honopou Stream. Refer to Field Investigation Report FI2008102704 (East Maui, Honopou Lowrie Ditch, restore) for more information.</p>		
Image Listing:	(Attach PDF of image contact sheet)		
File Name:	Brief Description:		
20081027013	EMI staff building a berm wall at Haiku Ditch on Honopou Stream by first placing banana leaves on the ditch grating structure.		
20081027015	EMI staff building a berm wall at Haiku Ditch on Honopou Stream.		
20081027017	EMI staff building a berm wall at Haiku Ditch on Honopou Stream.		
20081027018	EMI staff building a berm wall at Haiku Ditch on Honopou Stream.		
20081027020	Sanford Kekahuna helping EMI staff to gather boulders for building a berm wall at Haiku Ditch on Honopou Stream.		
20081027021	EMI staff building a berm wall at Haiku Ditch on Honopou Stream.		
20081027025	EMI staff building a berm wall at Haiku Ditch on Honopou Stream.		
20081027031	Completed berm wall at Haiku Ditch on Honopou Stream.		
20081027033	Completed berm wall at Haiku Ditch on Honopou Stream.		
20081027035	Completed berm wall at Haiku Ditch on Honopou Stream, near the three 4-inch bypass pipes.		
20081027038	Completed berm wall at Haiku Ditch on Honopou Stream.		
20081027039	Completed berm wall at Haiku Ditch on Honopou Stream.		
20081027040	Completed berm wall at Haiku Ditch on Honopou Stream.		

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>
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Attachments:

Brief Description:
1. Image Contact Sheet

Recommendations:

IMAGE CONTACT SHEET



20081027013.JPG



20081027015.JPG



20081027017.JPG



20081027018.JPG



20081027020.JPG



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20081027025.JPG



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20081027035.JPG



20081027038.JPG



20081027039.JPG

IMAGE CONTACT SHEET



20081027040.JPG