



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

FIELD INVESTIGATION REPORT
FI2008102303 (East Maui, Huelo IIFS Site A)

Date of Field Investigation:	October 23, 2008	Time (24-hour):	1300 - 1600
CWRM Staff:	Dean Uyeno, Ken Kawahara, Chui Ling Cheng		
Individuals Present:	Agency staff - Matt Wong (USGS-Maui field technician), Skippy Hau (DAR staff); Honopou community - Lynn Scott, Beatrice Kekahuna, Sanford Kekahuna, Boni Kekahuna, and Wanda Vierra; Huelo community - Ernie Schupp and Moke Kahiamoe		
Hydrologic Unit:	Hanehoi (6037)		
Stream Name:	Puolua (Huelo) Stream		
Findings:	<p>At approximately 1300 hours, the staff crew (CWRM staff, Skippy Hau and Matt Wong) and members from the Honopou community met with Ernie Schupp and Moke Kahiamoe at the parking lot of the Door of Faith Church on Huelo Road. From the church, everyone walked to Ernie's property via a dirt road. After arriving at the Haiku Ditch diversion on Puolua (Huelo) Stream, staff crew walked along the stream to the auwai intake where Ernie diverts water from the Puolua (Huelo) Stream for his taro loi. Matt Wong evaluated that length of the stream and found no locations suitable for collecting gage height readings, or the installation of a staff gage. However, Matt recommended a location for flow measurement, which represents IIFS Site A as indicated in the staff submittal. The flow measurement site is approximately 16 feet upstream of the auwai intake.</p> <p>Under Matt Wong's supervision, staff crew prepared the site for flow measurement. The site was flagged with yellow tape, labeled with the stream name, IIFS site, and the date. Staff crew completed the entire flow measurement in 15 minutes. In addition to flow measurement, staff crew also recorded wind velocity, air temperature, water temperature and weather conditions. As computed back in the Honolulu Office, the flow at IIFS Site A was 0.052 cubic feet per second (0.034 million gallons per day). No gage height measurements were collected.</p> <p>Staff crew concluded the field investigation at 1600 hours.</p>		
Image Listing:	(Attach PDF of image contact sheet)		
File Name:	Brief Description:		
20081023066	Haiku Ditch diversion structure on Puolua (Huelo) Stream.		
20081023068	Haiku Ditch diversion structure on Puolua (Huelo) Stream.		
20081023069	Haiku Ditch diversion structure on Puolua (Huelo) Stream.		
20081023070	Haiku Ditch diversion structure (intake gate) on Puolua (Huelo) Stream.		
20081023071	2 pipes on the concrete wall of the Haiku Ditch diversion structure on Puolua (Huelo) Stream.		
20081023072	2 pipes on the concrete wall of the Haiku Ditch diversion structure on Puolua (Huelo) Stream.		
20081023073	2 pipes on the concrete wall of the Haiku Ditch diversion structure on Puolua (Huelo) Stream.		
20081023074	Puolua (Huelo) Stream downstream from Haiku Ditch.		
20081023075	Auwai intake on Puolua (Huelo) Stream.		
20081023080	Matt Wong setting up flow measurement site on Puolua (Huelo) Stream.		
20081023081	Matt Wong setting up flow measurement site on Puolua (Huelo) Stream.		
20081023083	Matt Wong setting up flow measurement site on Puolua (Huelo) Stream.		
20081023086	Dean Uyeno conducting flow measurement on Puolua (Huelo) Stream.		
20081023092	CWRM staff (Dean Uyeno and Chui Ling Cheng) conducting flow measurement on Puolua (Huelo) Stream.		
20081023103	CWRM staff (Dean Uyeno and Chui Ling Cheng) conducting flow measurement on Puolua (Huelo) Stream.		
GPS Listing:			
Shapefiles:	(List file names of all shapefiles created and a brief description of each)		
File Name:	Brief Description:		
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)

WP No.	Latitude	Longitude	Brief Description:
18	20.903285	-156.225661	Haiku Ditch on Huelo Stream
19	20.903252	-156.225375	IIFS Site A Measurement Site on Huelo Stream

Attachments:

Brief Description:

1. Image Contact Sheet
2. Discharge Measurement and Gage Inspection Notes

Recommendations:

IMAGE CONTACT SHEET



20081023066.JPG



20081023068.JPG



20081023069.JPG



20081023070.JPG



20081023071.JPG



20081023072.JPG



20081023073.JPG



20081023074.JPG



20081023075.JPG



20081023080.JPG



20081023081.JPG



20081023083.JPG

IMAGE CONTACT SHEET



20081023086.JPG



20081023092.JPG



20081023103.JPG

ANGLE COEF-FICIENT	DIST. FROM INITIAL POINT	WIDTH	DEPTH	OBSERVA-TION DEPTH	REVO-LUTIONS	TIME IN SEC-ONDS	VELOCITY		ADJUST-ED FOR HOR. ANGLE OR	AREA	DISCHARGE
							AT POINT	MEAN IN VER-TICAL			
	LEW	@ 14:04									
	0.8	0.15	0							0	0
	1.1	0.25	0.18			40		0.13		.045	.006
	1.3	0.15	0.30			40		0.10		.045	.005
	1.4	0.10	0.38			40		0.12		.038	.005
	1.5	0.10	0.39			40		0.12		.039	.005
	1.6	0.10	0.40			40		0.12		.040	.005
	1.7	0.10	0.40			40		0.11		.040	.004
	1.8	0.10	0.40			40		0.09		.040	.004
	1.9	0.10	0.40			40		0.09		.040	.004
	2.0	0.10	0.40			40		0.10		.04	.004
	2.1	0.10	0.40			40		0.08		.04	.003
	2.2	0.10	0.35			40		0.08		.035	.003
	2.3	0.10	0.33			40		0.06		.033	.002
o	2.4	0.15	0.31			40		0.04		.047	.002
	2.6	0.10	0							0	0
	1.8	1.8						0.07		0.522	0.052
	REW	@ 14:20						0.10			
								average vel of whole section.			