



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

FIELD INVESTIGATION REPORT
FI2009021105 (East Maui, Palauhulu IIFS Site B)

Date of Field Investigation: February 11, 2009		Time (24-hour): 1430 - 1545	
CWRM Staff: Ed Sakoda, Dean Uyeno, and Chui Ling Cheng			
Individuals Present:			
Hydrologic Unit: Piinaau (6053)			
Stream Name: Palauhulu Stream			
Findings:			
<p>At 1430 hours, CWRM staff arrived at the Hana Highway bridge that crosses Palauhulu Stream. The bridge is near the entrance to Piinaau Road. Instead of hiking upstream and crossing over to the right bank to access the IIFS Site, staff hiked directly down the right streambank from Hana Highway to the IIFS Site under the bridge.</p> <p>Flow measurement was completed in 45 minutes. Staff also recorded water temperature and weather conditions. The water temperature was 19 degree Celsius and weather was overcast with no rain. As computed back in the Honolulu Office, the flow at the IIFS site was 3.191 cubic feet per second (2.063 million gallons per day), with gage height at -1.32 feet (the water level was 1.32 feet below the reference point). This was the highest discharge measured by CWRM staff in all field visits.</p> <p>Staff left Palauhulu IIFS Site B at approximately 1545 hours, and continued to document water flow in the na Moku Project taro patches. Refer to Field Investigation Report FI2009021106 (East Maui, Na Moku Project) for more information.</p>			
Image Listing: (Attach PDF of image contact sheet)			
File Name:	Brief Description:		
20081209001	CWRM staff setting up reference point on right bank of Palauhulu Stream.		
20081209004	Reference point on right bank of Palauhulu Stream.		
20081209007	CWRM staff taking gage height readings on right bank of Palauhulu Stream.		
20081209008	CWRM staff taking gage height readings on right bank of Palauhulu Stream.		
20081209009	CWRM staff taking gage height readings on right bank of Palauhulu Stream.		
20081209012	Palauhulu Stream upstream of Hana Highway.		
GPS Listing:			
Shapefiles: (List file names of all shapefiles created and a brief description of each)			
File Name:	Brief Description:		
Waypoints: (List all waypoints in decimal degrees and provide a brief description of each)			
WP No.	Latitude	Longitude	Brief Description:
Attachments:			
Brief Description:			
1. Discharge Measurement and Gage Inspection Notes			
Recommendations:			

River at -											
ANGLE COEF. FICIENT	DIST. FROM INITIAL POINT	WIDTH	DEPTH	OBSERVATION DEPTH	REVO. LUTIONS	TIME IN SEC. ONDS	VELOCITY		ADJUST. ED FOR HOR. ANGLE OR	AREA	DISCHARGE
							AT POINT	MEAN IN VER. TICAL			
LEW	@	1447									
		3.55	$\frac{1.25}{2.25}$	0				-		0	-
		3.8	.225	.12				$\frac{1}{2}(.71) = .36$.027	.010
		4.0	.25	.92		40		.71		.23	.163
		4.3	.30	1.08		40		.80		.324	.259
		4.6	.30	1.01		40		.79	.884	.303	.239
		4.9	.25	.95		40		.81		.238	.193
		5.1	.20	.99		40		.71		.198	.141
		5.3	.20	.95		40		.71	1.51	.190	.135
		5.5	.20	.82		40		.80		.164	.131
		5.7	.20	.84		40		.86	1.842	.168	.144
		5.9	.20	.97		40		.85		.194	.165
		6.1	.20	1.04		40		.87	2.244	.208	.181
0		6.3	.20	.93		40		.84		.186	.156
		6.5	.25	.90		40		.89		.225	.200
		6.8	.30	.85		40		.89	2.91	.255	.227
		7.1	.30	.80		40		.84		.24	.202
		7.4	.25	.81		40		.78	3.353	.203	.158
		7.6	.20	.79		40		.77		.158	.122
		7.8	.20	.70		40		.83	3.651	.14	.116
		8.0	.20	.50		40		.87	3.661	.10	.087
		8.2	.20	.74		40		.61	3.809	.148	.090
		8.4	.20	.55		40		.51	3.919	.110	.056
		8.6	.20	.42		40		.18	4.003	.084	.015
		8.8	.225	.20		40		.02	4.048	.045	.001
		9.05	.125	0						0	
		5.5	5.5					AVE = .77		4.448	3.191
REW	@	1531						0.77		4.138	