

Kanu

1

Stream Name	Hilawe stream	
Date	sep. 19, 2004	
Start Time		
GPS reading (0 m)	N: 20.10593 / W: 155.45576	
GPS reading (100 m)	Wpt. 297 N: 20.105850, W: 155.45592	
Observers	Hihiwai #1	
Comments	Wpt: 296	

Leina'ala
Iliana
Kawai'ikapu
Kaleo

S = small
M = medium
L = large

Transect # 0	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.4	0.7	0.9	0	0	0.2	.3	.05	0	0	0	0	0	0
Water Speed	M/S	M	F/M	0	0	slow	slow	slow	0	0	0	0	0	0
Substrate Size	L	S	M/L	L/M	M/L/S	S/M	L/M	L/M/S	L	L	S/M	M	M	sml
Other maj. feat.				Dry	Dry						Dry	Dry	Dry	Dry

Transect # 0	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	.7	3	0										
Water Speed	0	S	S	0										
Substrate Size	S/M	M	M	sml										
Other maj. feat.	Dry			Dry										

Transect # 1	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.2	0.1	1.4	0.6	0.6	0	0.1	0.3	0.9	0.2	0.3	0	0	0
Water Speed	0	S	M	F	S/M	0	S	F	M/F	M	M	0	0	0
Substrate Size	M/L	S/M	M/L	M/L	M/L	L	L	L	L	L	M	M/L	M/L	M/L
Other maj. feat.	stream bank											Dry	Dry	Dry

Transect # 1	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	0.3	0	0.1	0									
Water Speed	0	M	S	S	0									
Substrate Size	M	M	S/M/L	M	M/L									
Other maj. feat.				stream bank										

Transect # 2	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	1.25	1.15	1.3	0.9	0.5	0.85	0.65	Dry	Dry	Dry	0.5	0.15	0.2
Water Speed	0	F	M	S	S	F	F	M	Dry	Dry	Dry	S	S	S
Substrate Size	S/M	S/M	M	M	M	S/M	S	L	L	L	M/L	M	S	M
Other maj. feat.	Bank								Big rock					

Transect # 2	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.1	Dry	0.35	Dry	0.15	0.0	Dry							
Water Speed	S	Dry	S	Dry	S	S	Dry							
Substrate Size	S/M	L	S/M	L	S/M	M/L	L							
Other maj. feat.							Bank							

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Kan 9

1

Stream Name	Hipi Iawe	
Date	9/14/2004	
Start Time	9:04	
GPS reading (0 m)	N 20, 10661°	
GPS reading (100 m)	W 155, 59633°	
Observers		
Comments	stop time. wpt 291 wpt 292 N 20, 10691° W 155, 59637°	

Leibhu
Kaily
J. D.
Wendula

Transect # 1	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	.1	.8	0	0	1.3	.9	1.0	0						
Water Speed	S	M	0	0	M	M	S	0						
Substrate Size	S	M	0	0	L	ML	M							
Other maj. feat.			Big	Big										

Boulder Boulder

Transect # 2	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0	.1	.5	.3	.5	.6	.9							
Water Speed	0	M	M	M	M	M	M							
Substrate Size	0	M	L	S	S	L	M							
Other maj. feat.	stream bank						stream bank							

Transect # 3	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0	.1	1.0	0	.6	1.1	.4	0	.2	.6				
Water Speed	S	S	S	0	M	M	S	0	0					
Substrate Size	M	M	S	L	M	L	LM	0	ML					
Other maj. feat.	Stream Bank			Boulder			Stream Bank							

Transect # 4	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0	.4	.4	.7	1.5	1.1	1.2	.3	0	.5				
Water Speed	S	M	S	M	M	M	M	M	0	S				
Substrate Size	L	S	sm	M	S	M	M	sm	ML	sm				
Other maj. feat.	Stream Bank		Pipe					Boulders		Stream Bank				

Transect # 5	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0	.1	0	1.0	0	.2	0	.1	0					
Water Speed	S	M	0	F	0	S	0	M	0					
Substrate Size	LM	L	0	L	L	sm	L	S	M					
Other maj. feat.	Stream Bank		Boulder		Boulder				Stream Bank					

Transect # 6	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0	0	.9	1.2	1.0									
Water Speed	S	S	M	M	S									
Substrate Size	SM	L	LM	M	S									
Other maj. feat.	Stream Bank				Stream edge									

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Kan-4

1

Hiiwai A
Hiiwai
Jacob
Iokapa

Stream Name	Hiiwai	
Date	9/15/2004	
Start Time	12:46 pm	
GPS reading (0 m)	N 20.10406° W 155.59610°	
GPS reading (100 m)	N 20.10599° W 155.59572°	
Observers	Hiiwai A	
Comments	WPT 294	

Transect #	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0	0	0.3	0.9	1.0	0.6	0.4	0.1	0.3	0.05				
Water Speed	0	0	S	S	m	m	m	S	S	S				
Substrate Size	LGL	L	m	S	m	s/m	m	S	S	s/m				
Other maj. feat.	Stream Bank	Big Rock		lots of debris										

Transect #	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0	0.7	0	1.0	0	0	0.5	0.5	0.1	0.2	0			
Water Speed	0	S	0	F	0	0	S	S	S	S	0			
Substrate Size	m/L	m/L	L	S/m	L	S/m	S	S	S	S				
Other maj. feat.	Stream Bank		Big Rock		Big Rocks						Dry			

Transect #	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0.35	0	0.7	0.1	0	0.25	0.2	0.1	0.5	0	3.6	0.6	0	
Water Speed	S	0	m	S/m	0	S/m	m/F	F	m	0	F/L	S	0	
Substrate Size	S	m	m/S	L/m	L	m/B	m/L	S/m	0	L	m/L	S	Gravel	
Other maj. feat.	Stream Bank	Rock	0	0	Big Rock	0	0	0	0	Big Rock	0	0	0	

Transect #	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0.2	0.7	0	0.5	0	1.1	0	0	0	0	0.2	0.6	0.1	0
Water Speed	m	m	0	m	0	F	0	0	0	0	S	m	S	0
Substrate Size	L	m/S	L/m	m/L	L	L	L/m	m	S/m	S/m	S/L	L	S	m
Other maj. feat.	Stream Bank		Big Rocks		Big Rocks		Big Rocks	Big Rocks	Rocks	Rocks				Stream Bank

Transect #	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0.1	0.5	1.1	0.1	0.3	0	0	0.55	0	0	0.3	0	0	0
Water Speed	S	S	S	S/m	S	0	0	S	0	0	S	0	0	0
Substrate Size	m	L	m/S	L	S/L	L	m/S	m	m/S	L	S	L	S	m/S
Other maj. feat.	Stream Bank					Dry	Dry		Dry	Dry		Big Dry		

Transect #	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0.4													
Water Speed	m													
Substrate Size	m													
Other maj. feat.	Stream Bank													

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

9/16/04
Gage above Araki
road crossing

Nany

FLOW DATA SHEET

Mean Velocity¹ = 6/10ths Depth
Surface Velocity² = 6/10ths Depth x 2
Bottom Velocity³ = 6/10ths Depth / 2

BANK FULL	STREAM EDGE														BANK FULL
	Species										Molly		Green swordtail		
Stream Edge Width (feet)	Molly						5 cm				9 cm	9 cm		1.5 cm	
Stream Edge Depth (feet)	Molly						7 cm				9.5			1.5 cm	
Flow Rate Width (ft/sec)	Molly						9 cm				5 cm			1.5 cm	
Flow Rate Depth (ft/sec)	Molly						16.3 cm				5 cm			1.5 cm	
Substrate/ % Vegetation											2 cm			2 cm	
% Plant Coverage	Molly						6 cm				5 cm			2 cm	
Mean Velocity ¹ (ft/sec)	Molly						6.5 cm				4 cm				
Surface Velocity ² (ft/sec)	Molly						5 cm				2 cm				
Bottom Velocity ³ (ft/sec)	green swordtail						4.5 cm				2 cm				

DATE	HYDROLAB				2.3cm 2.2cm 2.0cm 1.9cm 1.7cm 1.6cm 2 cm Transect Line FLOW
TIME	WIDTH (feet)				
OBSERVER	TEMPERATURE (°C)				
REACH	DISSOLVED OXYGEN (mg/L)				
TRANSECT#	CONDUCTIVITY (mS/cm)				
DAR_CODE	pH				
STREAM	TURBIDITY (NTU)	0.63			
TRIBUTARY	TOTAL SUSPENDED SOLIDS (mg/L)				

SITE PICTURE

FLOW DATA SHEET

Mean Velocity¹ = 6/10ths Depth
 Surface Velocity² = 6/10ths Depth x 2
 Bottom Velocity³ = 6/10ths Depth / 2

9/15/04
 9:30 am

Hill Hi Way
 (near stream gauge)

BANK FULL

STREAM EDGE

STREAM EDGE

BANK FULL

Stream Gauge 0.66

Stream Edge Width (feet)	10	1.5	2 FT	3 FT	4.5 FT	5 FT	6 FT	7 FT	8 FT	9 FT	10	11	12 FT	13 FT	14 FT	15 FT	16 FT	17 FT	17.1 FT
Stream Edge Depth (feet)	0	0	0.65	0.65	0.25	0.15	1.3	1.0	1.3	1.7	1.5	1.08	1.64	1.54	1.5	1.9	1.32	1.22	0
Flow Rate Width (ft/sec)																			
Flow Rate Depth (ft/sec)																			
Substrate/ % Vegetation																			
% Plant Coverage																			
Mean Velocity ¹ (ft/sec)	0	0	0.03	0.07	0.24	0.23	0.20	0.16	0.26	0.28	0.38	0.32	0.37	0.30	0.21	0.16	0.06	0.05	0
Surface Velocity ² (ft/sec)											0.32	0.41	0.42	0.38	0.21	0.16	0.09	0.08	0
Bottom Velocity ³ (ft/sec)											0.36	0.06	0.14	0.27	0.08	0.07	0.01	0.01	0

DATE	HYDROLAB %				Transect Line
TIME	WIDTH (feet)				
OBSERVER	TEMPERATURE (°C)	27.40			
REACH	DISSOLVED OXYGEN (mg/L)	9.34	108.79	sat at 10h	
TRANSECT#	CONDUCTIVITY (mS/cm)	0.152			
DAR_CODE	pH	7.91			
STREAM	TURBIDITY (NTU)				
TRIBUTARY	TOTAL SUSPENDED SOLIDS (mg/L)				

FLOW ↓

SITE PICTURE

FLOW DATA SHEET

Mean Velocity¹ = 6/10ths Depth
 Surface Velocity² = 6/10ths Depth x 2
 Bottom Velocity³ = 6/10ths Depth / 2

STREAM EDGE

BANK FULL

BANK FULL

STREAM EDGE

Stream Edge Width (feet)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Stream Edge Depth (feet)	0	0.1	0.6	0	0.05	0.1	0	0.2	0.1	0.2	0.4	0.9	0.8	0.5	0.45	0	0	0.3
Flow Rate Width (ft/sec)																		
Flow Rate Depth (ft/sec)																		
Substrate/ % Vegetation																		
% Plant Coverage																		
Mean Velocity ¹ (ft/sec)	0	0	0.07	0	0.02	0.29	0	1.04	1.08	0.44	0.90	1.99	2.94	0.09	0.01	0	0	0.26
Surface Velocity ² (ft/sec)																		
Bottom Velocity ³ (ft/sec)																		

DATE	HYDROLAB				FLOW ↓ Transect Line
TIME	WIDTH (feet)				
OBSERVER	TEMPERATURE (°C)				
REACH	DISSOLVED OXYGEN (mg/L)				
TRANSECT#	CONDUCTIVITY (mS/cm)				
DAR_CODE	pH				
STREAM	TURBIDITY (NTU)				
TRIBUTARY	TOTAL SUSPENDED SOLIDS (mg/L)				

SITE PICTURE

Kanu

Hille, Jacob, Lokapa

FLOW DATA SHEET

Mean Velocity¹ = 6/10ths Depth
 Surface Velocity² = 6/10ths Depth x 2
 Bottom Velocity³ = 6/10ths Depth / 2

9/15/04

10:40 am

Hihiwai

(below riffle)

BANK
FULL

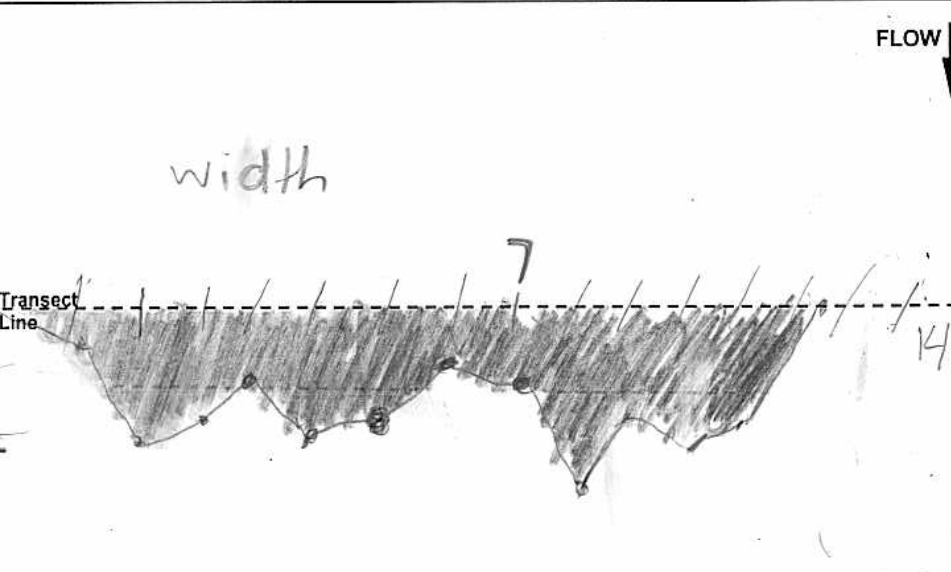
STREAM EDGE

12.6 ft - width

STREAM EDGE

BANK
FULL

Stream Edge Width (feet)	0	1 ft	2 ft	3 ft	4 ft	5 ft	6 ft	7 ft	8 ft	9 ft	10 ft	11 ft	12 ft	12.6 ft				
Stream Edge Depth (feet)	0	0.2 ft	0.9 ft	0.7 ft	0.58 ft	0.9 ft	0.35 ft	0.4 ft	0.6 ft	1.4 ft	0.8 ft	1.0 ft	0.6 ft	0				
Flow Rate Width (ft/sec)																		
Flow Rate Depth (ft/sec)																		
Substrate/ % Vegetation																		
% Plant Coverage																		
Mean Velocity ¹ (ft/sec)	0	0.2	0.09	0.18	0.05	0.22	0.71	0.46	1.34	1.34	1.41	0.14	0.04	0				
Surface Velocity ² (ft/sec)	0	0.01	0.06	0.14	0.04													
Bottom Velocity ³ (ft/sec)	0	0.2	0.08	0.13	0.02													

DATE	HYDROLAB							
TIME	WIDTH (feet)							
OBSERVER	TEMPERATURE (°C)							
REACH	DISSOLVED OXYGEN (mg/L)							
TRANSECT#	CONDUCTIVITY (mS/cm)							
DAR_CODE	pH							
STREAM	TURBIDITY (NTU)							
TRIBUTARY	TOTAL SUSPENDED SOLIDS (mg/L)							

FLOW
↓

width

Transect
Line

depth

SITE PICTURE

FLOW DATA SHEET

Mean Velocity¹ = 6/10ths Depth
 Surface Velocity² = 6/10ths Depth x 2
 Bottom Velocity³ = 6/10ths Depth / 2

Kanu
 Kailyleiohu
 Nopili Jd. Wena

BANK
FULL

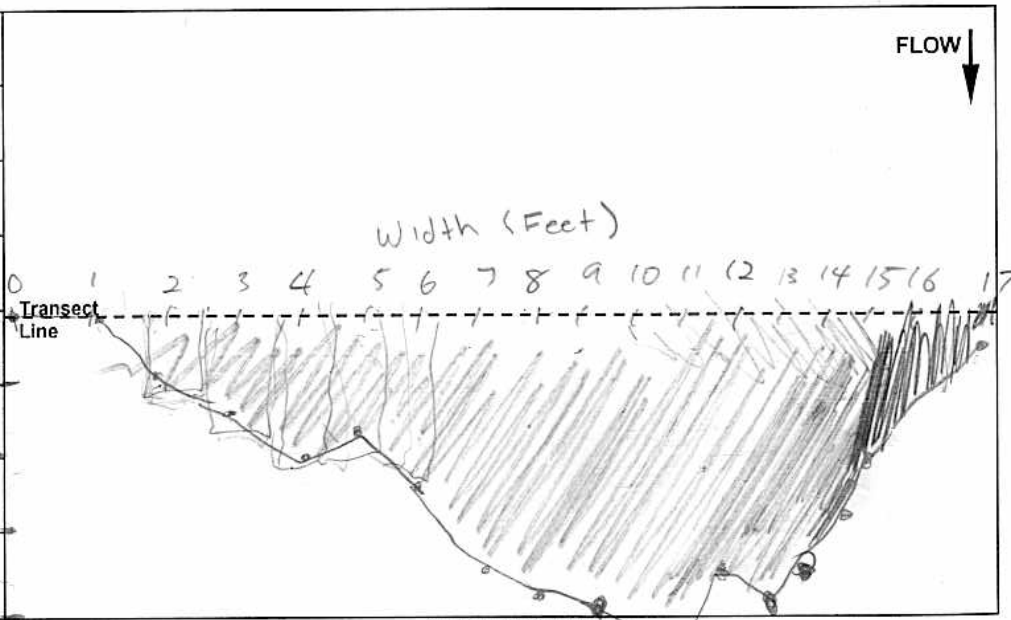
STREAM EDGE

STREAM EDGE

BANK
FULL

Stream Edge Width (feet)	0	1	2.4	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Stream Edge Depth (feet)	0	0	.5	.9	1.4	.6	1.3	1.6	1.9	2.1	2.1	2.05	1.7	1.9	1.8	1.3	1.1	0.2
Flow Rate Width (ft/sec)																		
Flow Rate Depth (ft/sec)																		
Substrate/ % Vegetation																		
% Plant Coverage																		
Mean Velocity ¹ (ft/sec)	0	0	0.02	0.09	0.02	0.21	0.21	0.31	0.8	0.10	0.27	0.31	0.27	0.19	0.25	0.15	0.4	0.02
Surface Velocity ² (ft/sec)																		
Bottom Velocity ³ (ft/sec)																		

DATE	HYDROLAB			
TIME	WIDTH (feet)	17 Ft		
OBSERVER	TEMPERATURE (°C)	22.47°		
REACH	DISSOLVED OXYGEN (mg/L)	9.43		
TRANSECT#	CONDUCTIVITY (mS/cm)	0.152		
DAR_CODE	pH	7.95		
STREAM	TURBIDITY (NTU)			
TRIBUTARY	TOTAL SUSPENDED SOLIDS (mg/L)			



SITE PICTURE

FLOW DATA SHEET

Mean Velocity¹ = 6/10ths Depth
 Surface Velocity² = 6/10ths Depth x 2
 Bottom Velocity³ = 6/10ths Depth / 2

leina ala
 kaleo
 kawai kapu
 Ilana

Kanu

STREAM EDGE

STREAM EDGE

BANK FULL

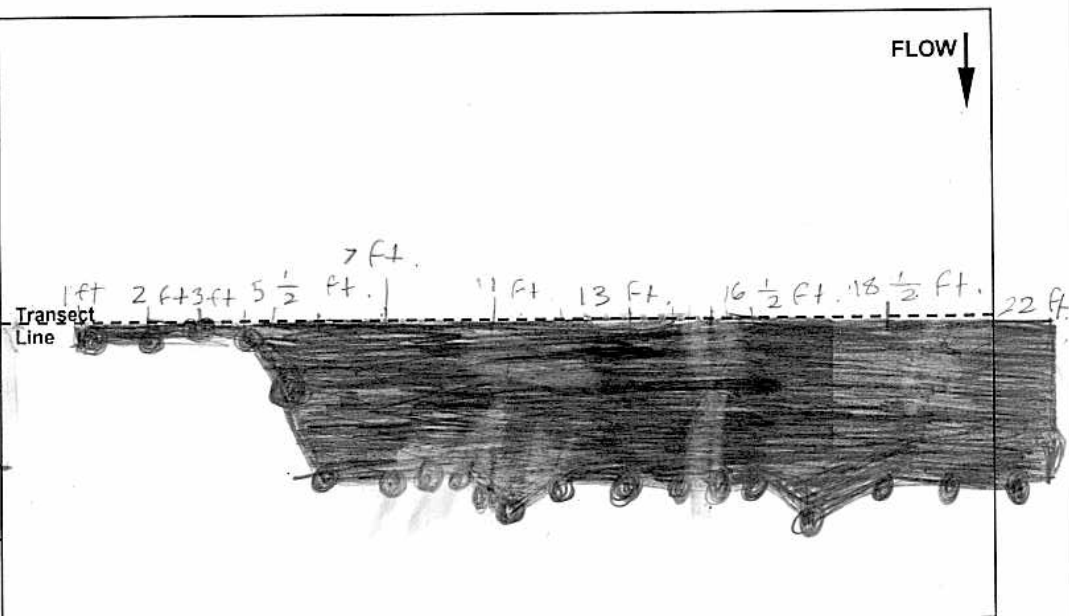
BANK FULL

w: 21.1 ft.

Stream Edge Width (feet)	0 ft	1 ft	2 ft	3 ft	4 ft	5 ft	6 ft	7 ft	8 ft	9 ft	10 ft	11 ft	12 ft	13 ft	14 ft	15 ft	16 ft	17 ft	18 ft
Stream Edge Depth (feet)	0 ft	.15 ft	.1 ft	0 ft	.05 ft	.4 ft	.9 ft	1.05	1.05	1.05	1.35	1.5	1.44	1.44	1.44	1.3	1.3	1.2	1.1
Flow Rate Width (ft/sec)																			
Flow Rate Depth (ft/sec)																			
Substrate/ % Vegetation																			
% Plant Coverage																			
Mean Velocity ¹ (ft/sec)	0 ft	0 FPS	.02 FPS	0 FPS	.06 FPS	.13 FPS	.05 FPS	0.19	0.07	0.25	0.35	0.36	0.19	0.33	0.38	0.32	0.30	0.33	0.25
Surface Velocity ² (ft/sec)																			
Bottom Velocity ³ (ft/sec)																			

Edge Middle

DATE	HYDROLAB		
Sep 15, 2004	#1	#2	#
TIME	WIDTH (feet)	21.1 ft	21.1 ft
12:35 AM	TEMPERATURE (°C)	22.57	22.51
OBSERVER	DISSOLVED OXYGEN (mg/L)	9.51	9.61
REACH	CONDUCTIVITY (mS/cm)	.150	.152
TRANSECT#	pH	8.08	8.07
DAR_CODE	TURBIDITY (NTU)		75
STREAM	TOTAL SUSPENDED SOLIDS (mg/L)		1.2
TRIBUTARY			



SITE PICTURE

FLOW DATA SHEET

Mean Velocity¹ = 6/10ths Depth
 Surface Velocity² = 6/10ths Depth x 2
 Bottom Velocity³ = 6/10ths Depth / 2

BANK
FULL

STREAM EDGE

21.1 ft

BANK
FULL

Stream Edge Width (feet)	ft 19	ft 20	ft 21.1																
Stream Edge Depth (feet)	1.05	1 ft	0.99																
Flow Rate Width (ft/sec)																			
Flow Rate Depth (ft/sec)																			
Substrate/ % Vegetation																			
% Plant Coverage																			
Mean Velocity ¹ (ft/sec)	0.22	0.15	0.02																
Surface Velocity ² (ft/sec)																			
Bottom Velocity ³ (ft/sec)																			

DATE	HYDROLAB				FLOW ↓ Transect Line
TIME	WIDTH (feet)				
OBSERVER	TEMPERATURE (°C)				
REACH	DISSOLVED OXYGEN (mg/L)				
TRANSECT#	CONDUCTIVITY (mS/cm)				
DAR_CODE	pH				
STREAM	TURBIDITY (NTU)				
TRIBUTARY	TOTAL SUSPENDED SOLIDS (mg/L)				

SITE PICTURE

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: Hihinaik P

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Hihinaik ELEVATION: _____ (ft)

DATE: SEP 1 15 12004 TIME: 9 27 AM TO 9:31 AM
Mo. Day Yr. (START) PM (STOP) P

SUBSTRATE TYPE (%):

SEDIMENT 10% SAND _____ GRAVEL 20%

COBBLE 10% BOULDERS 60% BEDROCK _____

DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1ft x 1ft depth

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

N: 20.10653°

W: 155.59636°

wpt 266

COMMENTS:

Random No.: 2, 1

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: (RANDOM) NONRANDOM OBSERVER: H.H. Wai 1
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hailawo ELEVATION: 70 (ft.)
 DATE: 9 / 15 / 04 TIME: 10:00 AM TO 10:00 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 20%
 COBBLE 50% BOULDERS 30% BEDROCK _____
 DETRITUS _____

HABITAT TYPE:

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

North: 20.1067
 W: 155.59598
 Wpt: 267

COMMENTS:

Random No.: 7, 6

Site No.: 2

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA *Mite*

G-212

J. L. DARLING CORP.
 www.RiteInTheRain.com
 (253) 232-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hihiiwai #1
 HSA CODE: _____ - _____ - _____ TEMPERATURE: _____ (°C)
 NAME: Hihiiwai ELEVATION: 80 ft (f)
 DATE: 9 / 15 / 2004 TIME: 10:42 AM TO _____ A
 Mo. Day Yr. (START) PM (STOP) P

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 40%
 COBBLE 50% BOULDERS 10% BEDROCK _____
 DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1 ft
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

W.P. 268

N 20.10609°

55.59551°

Note
 one tahitian pron
 (female)
 2 1/2 - 3 in.
 with eggs

COMMENTS:

Random No.: 4 , 0

Site No.: 3

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: H. H. W. A. R.

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Hillane stream ELEVATION: 80 ft. (ft)

DATE: SEP / 19 / 2004 TIME: 11:00 AM TO 11:05 AM
Mo. Day Yr. (START) PM (STOP) P

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 10% GRAVEL _____

COBBLE 30% BOULDERS 60% BEDROCK _____

DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1 1/2 ft.

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

WPT. 269
N: 20.10578
W: 155.59592

COMMENTS:

Random No.: 3, 6

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: hopilis
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Hilawe ELEVATION: 75 (ft.)
DATE: SEP 1 15 2004 TIME: 1:43 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM
SUBSTRATE TYPE (%):
SEDIMENT _____ SAND 100% GRAVEL 30%
COBBLE 30% BOULDERS 30% BEDROCK _____
DETRITUS _____
HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1.2 Ft Deep
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

COMMENTS: N 20.106 13°
W 155.595 99°

Random No.: _____

Site No.: 3DIVISION OF AQUATIC RESOURCES
GRH 2/02

DURA

WPT 272

J.L. DARLING CORP.
www.RiteintheRain.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: ho filis
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hillawe ELEVATION: 60 Ft (ft)
 DATE: 9 / 15 / 2004 TIME: 12.52 AM TO 12:57 A
 Mo. Day Yr. (START) PM (STOP) P

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 30% GRAVEL 10%
 COBBLE 30% BOULDERS 25% BEDROCK 5%
 DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1ft Deep
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER Fast

SPP: SIZE ♂ ♀ ?

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 and hade 1 lich
 Oh him.

COMMENTS:

Random No.: 2, 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 1

~ 20. 10643°
 W 155. 59627°
 w.p.t 270

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: ho pilis
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: H. I. Lawe ELEVATION: _____ (ft.)
DATE: SEP 15 2004 TIME: 1141 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 25% GRAVEL 18%
COBBLE 20% BOULDERS 40% BEDROCK _____
DETRITUS _____

HABITAT TYPE:

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

T. H. H. H. H.
Prawn

1-2 Long

N 20.10416°
W 155.5925°

W. ft 271

COMMENTS:

Random No.: 2, 2

Site No.: 2

DIVISION OF AQUATIC RESOURCES
GRH 2/02

DURA

J. L. DARLING CORP.
www.RiteintheRain.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: Hill Wain

HSA CODE: _____

TEMPERATURE: _____ (°C)

NAME: Hill Wain

ELEVATION: _____ (ft)

DATE: SEP 15 12004 TIME: 2:33

Mo. Day Yr.

(START)

AM
PM

TO 2:38 (STOP) (P)

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 30 GRAVEL _____

COBBLE _____ BOULDERS 40 BEDROCK _____

DETRITUS 30

HABITAT TYPE: _____ SURVEY AREA (l" x w" x h"): 1 FT

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

N 20.10607°

W 155.59601°

COMMENTS:

Random No.: 1, 9

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: H. H. H. A

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Hillawe ELEVATION: _____ (ft.)

DATE: sep 15 2004 TIME: 2:51 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 10% GRAVEL 30%

COBBLE 30% BOULDERS 30% BEDROCK _____

DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 0.4 ft

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

N 20.10571
W 155.59610

COMMENTS:

Random No.: _____

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hi Hi Weir

HSA CODE: - - - TEMPERATURE: (°C)

NAME: Ni'ila'we ELEVATION: 90 ft (f)

DATE: sep 15 12 00 4 TIME: 3:22 AM TO 3:34 A
Mo. Day Yr. (START) PM (STOP) P

SUBSTRATE TYPE (%):

SEDIMENT 30 SAND 70 GRAVEL

COBBLE BOULDERS BEDROCK

DETRITUS

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1.4 ft

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.10537
W 155.59570
Wgpt, 275

COMMENTS:

Random No.: 5.9

Site No.: 3