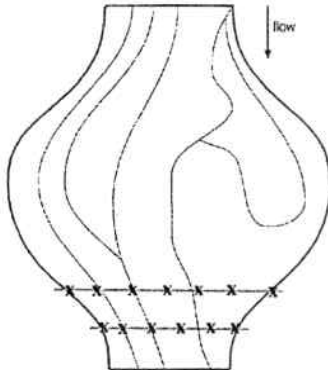


Stream Name	Lakehea	Stream Mapping Data Sheet
Date	11/6/04	
Start Time	11:10	
GPS reading (0 m)	N20.045864 W155.1523	
GPS reading (100 m)		
Observers		
Comments	WPT 322	

Transect # 0	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	0.5 ft	0.1 ft	0.5 ft	0.6							
Water Speed	0	0	0	0	slow	slow	slow							
Substrate Size	med	ML	ML	ML	M	ML	ML							
Other maj. feat.	stream	Dry	0	0	0	0	Boulder							

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	0	0.5 ft	2.2 ft	2.6 ft	2.8 ft									
Water Speed	0	slow	slow	slow	slow									
Substrate Size	SM	M/SM	M/SM	M/SM	M/L									
Other maj. feat.	stream	0	0	0	0									

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	0	3.0	3.5	1.1									
Water Speed	S	0	S	S	S									
Substrate Size	M	0	L	S	L									
Other maj. feat.	Bank	solid			Boulder									

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	0	0.7											
Water Speed	slow	0	slow											
Substrate Size	L	0	Large											
Other maj. feat.	Boulder	Boulder												

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	0	0.1	0.1	0									
Water Speed	0	slow	slow	slow	slow									
Substrate Size	Boulders	Small	Large	Small	Small									
Other maj. feat.	B	BR	Boulder	0	SB									

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Kalalea	
Date	NOV 8 2004	
Start Time	12:40 AM	
GPS reading (0 m)	N 20.08803 W 155.60046	
GPS reading (100 m)		
Observers		
Comments	WPT 325 325 20.08810 W 155.60123	

water pressure
1:24
Students in water
near gage.

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	0m	0.05m	0m	0m	0.05	0								
Water Speed	C	S	0m	0m	S	0								
Substrate Size	M/L	L	L	L	L	0								
Other maj. feat.	stream bank		Dry	Dry	limu	stream bank								

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	0.2	0	0	0										
Water Speed	S-M	0	0	0										
Substrate Size	L	L	L	L										
Other maj. feat.	bank		land	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	0.25	0.3	0	0.2	0.05									
Water Speed	S	S	0	S	S									
Substrate Size	L	L	L	L	L									
Other maj. feat.	bank	limu	limu		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	0.75	1.0	0	0.75	0.4	0	0							
Water Speed	S	S	0	S	S	0	S							
Substrate Size	L	L	4/5	5/6	5/6	M/S	L							
Other maj. feat.	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	0.04	0	0	0									
Water Speed	S	F	S	S	S									
Substrate Size	L	L	L	L	L									
Other maj. feat.	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	0.05													
Water Speed	M/S													
Substrate Size	M/L													
Other maj. feat.	stream bank													

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Nov. 8. 2004
12:40 am

Transect # <u>7</u>	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	5	4	4.25	2.6	2.3	0.3	1.9	1.7	0					
Water Speed	S	S	S	S	M	M	S	S/M	0					
Substrate Size	L/S	L/S	L/S	L/S	L	L	L/S	L/M/S	L					
Other maj. feat.	bank			rock	rock	rock								

Transect # <u>8</u>	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														
Water Speed														
Substrate Size														
Other maj. feat.														

Transect # <u> </u>	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														
Water Speed														
Substrate Size														
Other maj. feat.														

Transect # <u> </u>	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														
Water Speed														
Substrate Size														
Other maj. feat.														

Transect # <u> </u>	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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Waipio Valley Stream Restoration Study

© Hawaii Biological Survey, Bishop Museum 2004

Stream Name	lala kea	Stream Mapping Data Sheet
Date	11-8-2004	
Start Time	1:40 p.m.	
GPS reading (0 m)	N 20.08802° W 155.60072°	
GPS reading (100 m)	upstream of big pool.	
Observers	Hilei, Jokepa, Kili	
Comments	wpt 327	

Deepest part of pool
is approximately 8 ft

instead of 10 m

(12 m)

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	1.65	2.3	1.5	3.35	4.25	3.8	3.5	3.1	1.65					
Water Speed	Med	slow	slow	Med	Med	Med	slow	slow	slow					
Substrate Size	lge	lge	lge	lge	small	med	lge	small	lge					
Other maj. feat.	stnk	φ	barrier	φ	φ	φ	φ	φ	stnk					

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

11-8-2004
1:40pm

Transect # <u>0</u>	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 ft	0 ft	1.2 ft	0.4 ft	0 ft	0.7 ft	0.7 ft	0.7 ft	0	1.2 ft	1.4 ft	1.9 ft	2.5 ft	2.45 ft
Water Speed	S	0	S	S	0	S	S	S	0	S	S	S	S	S
Substrate Size	SL	L	Lm	Sm	L	ML	S	mc	L	ms	ms	ms	ms	LS
Other maj. feat.	Sb diver	B.g. rock			B.g. rock				B.g. rock					stream bank

Transect # <u> </u>	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														
Water Speed														
Substrate Size														
Other maj. feat.														

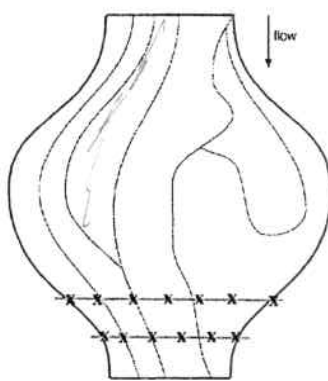
Transect # <u> </u>	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth														
Water Speed														
Substrate Size														
Other maj. feat.														

Transect # <u> </u>	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														
Water Speed														
Substrate Size														
Other maj. feat.														

Transect # <u> </u>	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														
Water Speed														
Substrate Size														
Other maj. feat.														

WPT 363

1

Stream Name	Hillawe	Stream Mapping Data Sheet 
Date	2/14/2005	
Start Time	11:40	
GPS reading (0 m)	N	
GPS reading (100 m)		
Observers		
Comments		

N 20.08889°

W 155.60025°

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	0	.2 ft	0	.5 ft	1.4 ft	1.5	1.7	1.85	0	0	.04			
Water Speed	0	slow	0	S	M	M	S	S	0	0	S			
Substrate Size	Bank	M/L	Boulder	L	M/L	L	L	S/L	Bank	Boulder	S/L			
Other maj. feat.	Stream Bank		Boulder						other					

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	0.3	0.8	1.05	2.7	3.7	4.0								
Water Speed	S	S	S	S	S	S								
Substrate Size	S	S	M	M/S	M/S	M								
Other maj. feat.	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	0.7	1.0	2.4	4.6	5.3	1.9							
Water Speed	0	S	S	S	S	S	S							
Substrate Size	M	M	M	L	L	L	L							
Other maj. feat.							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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Lalakea	
Date	2/14/2005	
Start Time	1:28 PM	
GPS reading (0 m)		
GPS reading (100 m)		
Observers	Leinaala Santos-colburn	
Comments	Leinaala Kili Iiana Kawakapu Kaleo	

N 20.08875°

W 155.60048°

WPT 366.
END

Elev. 2008

EVEL.

WPT 367

N 20.08841°

W 155.60054°

Transect # 0	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	1.4	1.4	2.15	3.7										
Water Speed	S	S	S	M										
Substrate Size	S	SM	L	L										
Other maj. feat.														

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	0.5	0.9	0.75	1.05	0	0.4								
Water Speed	S	S	S	SM	S									
Substrate Size	ML	ML	M	M	0	SL								
Other maj. feat.					Rock									

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	0.8	2.15	2.45	1.6	0	0.1								
Water Speed	M	M	M	M	0	S								
Substrate Size	L	L	L	L	0	L								
Other maj. feat.	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	1.4	1.6	0.6	0.7	0.3	1.5	0.7							
Water Speed	Fast	SM	SM	F	FM	SM	SM							
Substrate Size	SL	ML	L	L	L	L	SML							
Other maj. feat.														

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	0.15	1.7	1.2	0										
Water Speed	S	M,F	SM	0										
Substrate Size	ML	ML	ML	L										
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Lalakea	
Date	2/14/05	
Start Time	2:44pm	
GPS reading (0 m)	WPT 368 N20.08839° W155.60052°	
GPS reading (100 m)	WPT 327 N20.08816° W155.60066°	
Observers	JR, Kapa, Tina, Hilei	
Comments		

Transect # 0	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	1.0	0	0	0	2.55	0.65								
Water Speed	S	0	0	0	S	S								
Substrate Size	ML	L	L	M	ML	L								
Other maj. feat.	Bank	boulder	boulder				streambank							

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	0	1.8	0.95	0	0	0	0							
Water Speed	0	M/F	M/F	0	0	0	0							
Substrate Size	0	L	L	0	0	0	0							
Other maj. feat.	Bank	0		Boulder	Boulder	Boulder	streambank							

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	1.1	0.95	0.9	0.3	0							
Water Speed	0	S	S	m	m	m	0							
Substrate Size	0	m/s	m	m	s/m	S	0							
Other maj. feat.	stream edge						streambank							

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	2.9	2.4	1.4	0.6	1.0	0.9	1.25	0	1.5	1.7	2.6	2.8	3.2	1.6
Water Speed	S	sm	sm	sm	m	m	S	sm	S	S	S	S	S	S
Substrate Size	m	m	sm	sm	sm	sm	Lm	L	sm	sm	m	m	ML	L
Other maj. feat.	SB	SB	SB	SB										

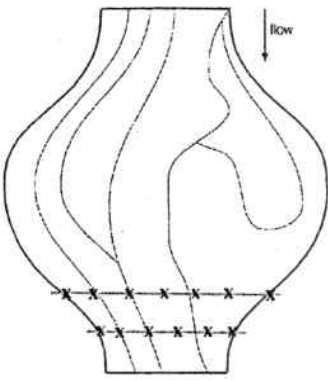
Transect # 4	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	1.5	1.65	0.4	0.4	0.2	0.3	0	0.3	0.7	0.7	0.2			
Water Speed	S	S	S	M	M	M	M	M	M	M	S			
Substrate Size	L	L	L	L	S/M	S/M	S/M	S/M	S/M	S	S/M			
Other maj. feat.	Boulder	Boulder	Boulder											

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hiliawe	Stream Mapping Data Sheet
Date	2-15-2005	
Start Time	10:00am	
GPS reading (0 m)	N 20.10630° W 155.59663° Wpt 373	
GPS reading (100 m)	N 20.10633° W 155.59627° Wpt 388	
Observers	Hili'e, J.R, Iokapa, I'ini	
Comments		



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	0	0.6	0.4	0.65	0	1.5	0.7							
Water Speed	0	S	S	S	0	m	m							
Substrate Size	0	S	S/m	sm	L	mL	L							
Other maj. feat.	Stream bank				Big rock		Stream bank							

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	0.7	0	1.3	1.2	1.5								
Water Speed	S	M	0	m	m/s	m/s								
Substrate Size	S	M	0	m	L/m	L								
Other maj. feat.	Stream bank		Big rock			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	0	0	0.95	0	0	1.2	0						
Water Speed	S	0	0	m	0	0	m/f	s						
Substrate Size	L	0	0	L	0	0	mL	L						
Other maj. feat.	SB	Br	Br		Br	Br		SB						

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	0.25	0.35	0.5	0	1.1	1.05	0.5	0						
Water Speed	S	S	F	0	F	M	M	0						
Substrate Size	S	sm	m/L	0	sm	sm	m/L	0						
Other maj. feat.				big rock				stream edge gravel						

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	0.6	0.4	0.55	0	0.6	0	0	0	0.25	0				
Water Speed	S	m	f	0	f	0	0	0	m	0				
Substrate Size	m	S	ms	L	ms	L	L	L	L	L				
Other maj. feat.	Stream bank			Big rock		Big rock	Big rock	Big rock		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	0.7	1.1	0.6	0.1	0.25	0							
Water Speed	0	m	m	m	S	S	0							
Substrate Size	L	L	SL	Lm	sm	mL	L							
Other maj. feat.	Stream bank						Stream bank							

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hirilawe	
Date	2/15/05	
Start Time	11:14 a.m.	
GPS reading (0 m)		
GPS reading (100 m)		
Observers	Leina'ala, Iliana, Kawakapa Kili, Kaleo	
Comments		

N 20.10626°
W 155.59608°
WPT-390

Transect # 0	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	0	0	0.8	0	0.55	1							
Water Speed	0	0	0	M	S	F	S							
Substrate Size	L	L	L	MS	L	L	LS							
Other maj. feat.	Bank	Bank	Bank											

Transect # 1	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	0	1	0.5	1.5	0	0.2	0.4	0	0.35				
Water Speed	0	0	S	S	F	0	M	S	0	S				
Substrate Size	L	L	M/S	S/L	L	L	L	M/S	L	S				
Other maj. feat.	rock	rock				rock								

Transect # 2	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.5	0.1	1.8	1.5	0.6	1.9	0	0	0	0				
Water Speed	M/F	S/M	M/F	M/F	S/M	S	0	0	0	0				
Substrate Size	S/M	L	M/S	M/L	S	M/S	L	L	L	on Bank				
Other maj. feat.	Bank													

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

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

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

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

N 20.10582°
W 155.59601°
WPT-392

1

Stream Name	Hillawe	Stream Mapping Data Sheet
Date	2/15/05	
Start Time	1:20pm	
GPS reading (0 m)		
GPS reading (100 m)		
Observers	Lei Olu, Hanu, J.D., Kiley, Wena	
Comments	End N 20.10591° W 155.59587°	

Begin
 N 20.10625°
 W 155.59599°

WPT 395

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	0	0.5	2.25	0	0.75	0.9	1.0	0	0	0.15	0.3			
Water Speed	0	S	M	S	M	F	F	0	0	S	S			
Substrate Size	Big	M	S/M	L	S	L	L	L	L	M/L	M/L			
Other maj. feat.	Bank			Boulder										

ROCKS ROCKS

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	0.5	0	0	0.7	0.1	0	0.2	0.2	0.3	0.3	0	0.3	0.4	0.4
Water Speed	S	0	0	M/F	M	0	F	M/F	M	F/M	0	M/F	S	F
Substrate Size	S	S/M/L	M/L	S/M	M/L	L	L	S/M	M	S/M	L	M/L	S/M/L	S/M/L
Other maj. feat.	Stream Bank	Boulder				Boulder					Boulder	Boulder		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	2.5	0.9	1.7	0.6	0	0.2	0	0	0.1	0	0.5	0	0.3
Water Speed	S	M	F	F	F	0	S	0	0	S	0	S	0	S
Substrate Size	L	M/S	L/B	M/L	M/L	L/B	S/M/L	B/M/L	L/B	L	L/B	S/M	L/B	L
Other maj. feat.	Stream Bank		Branch			Boulder			Boulder		Boulder		Boulder	

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	0												
Water Speed	S	0												
Substrate Size	M/L	L												
Other maj. feat.		branch												

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Kamehameha

1

UTP
399
up + 400

Stream Name	hi'ilawe	
Date	2/15/05	
Start Time	8:50	
GPS reading (0 m)	N20.10682° W 155.59623°	
GPS reading (100 m)	N20.10633° W 155.59612°	
Observers	Kahea, Dustin, Jacob, Chloe	
Comments	O'opu	

grp. #2 opae

GPS reading:
N 20.10618°
W 155.59628°
Start time: 9:50 a.m.
observers: Kaori,
Iwa, Nalu, Ahi
Stream name:
Hi'ilawe
date: 2.15.05

Transect # 0	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.1ft	.55	.05	.6	1.15	1.6	B							
Water Speed	slow	m	S	m	m	m	A							
Substrate Size	m/s	S	L	L/m	m/L	m	N							
Other maj. feat.	bank	X	rock	X	X	bank	k							

bank

Transect # 1	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.4	0.6	0.1	0.6	1.3	0.6								
Water Speed	slow	med	med	med	fast	med								
Substrate Size	L/S	med	Large	small	Large	small								
Other maj. feat.	Bank	X	X	X	X	Bank								

Transect # 2	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	.45	.5	.7	1.5	0	.2	.9	.4						
Water Speed	slow	slow	slow	med		med	fast	slow						
Substrate Size	med	small	small	med	large	large	med	med						
Other maj. feat.	Bank				rock			Bank						

Transect # 3	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	.2	.65	.45	1	1	1.1	.45						
Water Speed	slow	slow	slow	m	m	slow	med	slow						
Substrate Size	small	small	small	large	large	s/m	med	s/m						
Other maj. feat.	bank							bank						

Transect # 4	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	.7	1.7	1.35	.9	.35	.1	.25							
Water Speed	slow	med	med	slow	slow	med	slow							
Substrate Size	small	small	med	med	med	large	large							
Other maj. feat.	Bank						Bank							

Transect # 0	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	.1	0.3	0.7	1.2	0.9	0.9	0.3	0.1						
Water Speed	S	S	M	M	M	M	M	S						
Substrate Size	L	M	S	S	S	L	M	S						
Other maj. feat.	Stream	none	none	none	none	none	none	Stream						

bank

bank

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

2/17/05
8:50am

Transect # 1	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	0.4	0	1.1	1.25	0.9	.5	.25	0					
Water Speed	slow	slow	slow	medium	fast	slow	slow	slow	SS					
Substrate Size	small	small	small	medium	small	sm	m	small	small					
Other maj. feat.	stream	None	bolder	none	none	none	none	none	stream					

Bank

Bank

Transect # 2	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.3	0.7	0.9	0.9	1.2	0.6	0.9	0.2	0	0.2	0.4	0		
Water Speed	slow	med.	fast	fast	fast	med.	med.	slow	0	slow	slow	0		
Substrate Size	small	med.	med.	large	med.	med.	small	large	m/L	small	small	small		
Other maj. feat.	stream	none	none	none	none	none	none	none	rock	none	none	stream		

bank

bank

Transect # 3	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0.2	0.1	0.3	0.5	-	0.2	0.4	-	0.1	0.2				
Water Speed	slow	M	F	F	-	M	M	-	S	M				
Substrate Size	small	M	M	SM	L	S	M	L	M	M	L			
Other maj. feat.	stream	-	-	-	rock	-	-	rock	-	-	rock			

bank

stream bank

Transect # 1	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m
Est. Depth	0	0.5	0.3	0.3	0	8	7	2	1.5	4	0	0	0	0
Water Speed	0	S	S	MF	0	M	F	F	M	M	0	0	S	0
Substrate Size	L	M	S	S	B	M	M	M	B	S	0	M	S	B
Other maj. feat.	SB	0	0	0	rock	0	0	0	0	0	rock	rock	0	SB

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

14m

0.7

S

S

SB

Grp #3

10m
Keli

402

Kelsey
Kawioza ST. 10:40

N-20.10612
W-155.59402

WPT 403
N 20.10581
W 155.59592

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Waipio Valley Stream Restoration Study

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Stream Name	Hilawe	Stream Mapping Data Sheet
Date	4-14-05	
Start Time	9:05 am	
GPS reading (0 m)	428 20° 06' 404" N 155° 35' 715" W	
GPS reading (100 m)	424 20° 06' 391" N 155° 35' 713" W	
Observers	Tamra, Kady, & Brooke	
Comments		

Transect # 0	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	0.05	0.15	1.2	0.8	0.95	1.75	2.0	0.75						
Water Speed	S	M	M	M	M	M	M	S						
Substrate Size	M	L	M	L	L	M	S	M						
Other maj. feat.	SB							SB						

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	0.2	1.1	0.75	1.3	1.6	2.1								
Water Speed	S	M	M	F	F	F								
Substrate Size	S	L	L	M	M	L								
Other maj. feat.	SB					SB								

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	0.65	0	1.9	0	0.6	1.2	1.0						
Water Speed	S	M	S	M	S	MF	F	S						
Substrate Size	S	M	L	ML	L	M	M	M						
Other maj. feat.	SB		Boulder		Boulder			SB						

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	0												
Water Speed	S	0												
Substrate Size	M	L												
Other maj. feat.	SB	Boulder												

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hiliawe	
Date	4/14/05	
Start Time	10:15	
GPS reading (0 m)	NPT 425 N 20°06' 388' W 155°35' 771	
GPS reading (100 m)	W 155°35' 762' / 427	
Observers	John, Dale, Nainoa, Lā.	
Comments		

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	0	0	.45	.85	1.4	1.1	.1	1.5	.75					
Water Speed	S	S	S	m	mf	mf	Large	m	m					
Substrate Size	S	m	S	S	m	m	m	vs	S					
Other maj. feat.	sb	rock	none	none	none	none	rock	none	none					

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	1.2	1.9	1.8	1.9	0.7	0.6	0.6	0.3					
Water Speed	S	S	m	m-f	m	m	S-m	S-m	S-m					
Substrate Size	S	S	S	m	L	L	m	S	S					
Other maj. feat.	sb	pipe	none	none	rock	rock	rock	rock	none					

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	.6	.6	1-2	1.4	1.15	.7	.8	.0	.1					
Water Speed	S	S	M	M	M	M	M	S	S					
Substrate Size	S	L	M	L	M	M	M	M-L	S					
Other maj. feat.	SB	None	None	None	None	rock	None	rock	None					

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	0.9	0.3	0.7	1.7	0	0.9	0.5	5.5					
Water Speed	0	M	SM	M	M	0	SM	M	S					
Substrate Size	M	None	L	S	L	L	M	S	SM					
Other maj. feat.	SB	None	Rock	None	Rock	Rock	None	None	None					

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hilawe Stream	
Date	4-14-05	
Start Time	11:10 a.m.	
GPS reading (0 m)		
GPS reading (100 m)	end West 429 N 20° 06.364' W 155° 35.720'	
Observers	Iwa, I'o and Ori	
Comments	Begin: N 20° 06.372 W 155° 35.764 End	

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	0	1.1	0.8	1.3	1.1	0.9	0.5	0	0.2	0.3	0			
Water Speed	slow	med	m.fast	fast	m.fast	med	slow	none	slow	slow	none			
Substrate Size	small	med	med	med	large	med	small	large	small	small	large			
Other maj. feat.	st-bnk	none	none	none	none	none	none	boulder	none	none	boulder			

stream bank

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	0.15	0.6	0.5	0.75	0.8	0.7	0.2	0.45	0.6	0	0.2	0.1	
Water Speed	slow	slow	med	m.fast	m/f	fast	m	slow	m/f	m/f	none	slow	slow	
Substrate Size	small	small	med	small	large	large	med	med	med	large	large	med	med	
Other maj. feat.	st-bank	none	none	none	boulder	boulder	boulder	none	none	none	boulder	none	st-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	0.3	0.5	0.6	None	0.7	0.8	0.6	0.9	0.5	0.8	0.5	0.6	1.0	0.2
Water Speed	slow	Med	Med	None	Med	Fast	Fast	Fast	Fast	Fast	Med	Fast	Med	slow
Substrate Size	Medium	Med	Med	Bolder	Med	large	large	small	Med	med	fast	Med	Med	None
Other maj. feat.	st. bank	None	None	Bolder	None	Rock	boulder	none	Rock	none	Rock	Rock	None	st. 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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Lalakea	Stream Mapping Data Sheet
Date	4/15/05	
Start Time		
GPS reading (0 m)	Wpt 435 N 200 5.303' W 155 26.032'	
GPS reading (100 m)		
Observers	Hilei, Im, Kapa, JR.	
Comments		

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	0.8	1.0	2.5								
Water Speed	0	0	0	S	SM	F								
Substrate Size	0	0	0	L	L	M								
Other maj. feat.	stream bank	big rock	big rock											

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	stream 1.3	3.3	0											
Water Speed	0	M/F	M/F	0										
Substrate Size	0	L	S/L	0										
Other maj. feat.	stream bank	0		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	1.3	1.5	1.6	1.35	0.9	0.2	0	0					
Water Speed	0	S	S	M	M	F	S	0	0					
Substrate Size	0	MS	ML	SM L	ML	ML	M	0	0					
Other maj. feat.	stream bank							big rock	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	1.6	0.7	1.2	0.85	1.1	1.3	1.2	1.2	0	1.9	2.0	2.4	2.75	3.1
Water Speed	S	S	S	S	S	S	S	S	0	S	S	S	S	S
Substrate Size	L	L	MS	MS	LM	SM	SM	SM	L	SM	SM	SM	SM	SM
Other maj. feat.	stream bank								big rock					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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Lalakea	Stream Mapping Data Sheet
Date	4/15/05	
Start Time	11:27	
GPS reading (0 m)	Wpt 430 120° 05.316	
GPS reading (100 m)		
Observers	Horn, Le'ohu J.O., Kaily	
Comments		

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	0.26	1.3	0.0	1.7	2.1	2.4	2.3	1.8	0	0.02	0			
Water Speed	S	S	0	M	M	M	S	S	0	S	0			
Substrate Size	Sm	S	L	m/L	S	S/m	S/m	L	L	L	L			
Other maj. feat.			boulder						boulder	boulder	boulder			

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	0.15	1.2	2.5	4.9	4.01	4.00	4.00							
Water Speed	S	S	S	S	S	S	S							
Substrate Size	Sm	Sm	Sm/M	L	M	Sm	L							
Other maj. feat.	Stream bank						boulder							

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	1.3	1.6	0.9	4.8	5.6	6.8							
Water Speed	S	S	S	S	S	S	S							
Substrate Size	Sm	m/Sm	Sm	L	L	Sm/m	L							
Other maj. feat.	Stream bank			boulder										

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	1.01	1.9	2.7	2.9	0.2									
Water Speed	S	S	S	S	S									
Substrate Size	Sm	Sm/m	Sm	Sm/m	L									
Other maj. feat.	Stream bank				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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hi'ilawe	Stream Mapping Data Sheet
Date	4/15/05	
Start Time	1:22pm	
GPS reading (0 m)	WPT: 434	
GPS reading (100 m)	N 20° 05' 316' W 155° 36.026	
Observers	Hi'iliwai #1	
Comments	GPS: N 20° 5.303 W 155° 36.032 WPT: 435	

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	0.85	1.2	1.4	1.6	1.7	0	0.2	1.2						
Water Speed	M	F	S	F	F	0	M	M						
Substrate Size	ML	L	S	SM	L	L	L	L						
Other maj. feat.	bank		behind rock			no water	Bank							

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	0.25	0.55	0.8	1.8	0	0	0	0						
Water Speed	M	F	F	F	0	0	0	0						
Substrate Size	L	L	L	L	L	L	L	0						
Other maj. feat.	Bank				Boulder	Bed	stream							

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	0.5	0.4	0	0	1.8	0	0	1.8	1.7	0.3				
Water Speed	M/F	F	0	0	F	0	0	F	F	M				
Substrate Size	S/M	L	L	L	S/M	L	L	L	L	S/M				
Other maj. feat.	stream		Rock	Rock	Boulder	Boulder	Boulder							

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	0.75	0.35	0.7	1.4	0.1	0.5								
Water Speed	S	M	M	M	S									
Substrate Size	M/L	L	L	L	L									
Other maj. feat.	Bank				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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

(Water Speed (fast, medium, slow))

(Substrate Size (small, medium, large))

Stream Name	Hiliwag	Stream Mapping Data Sheet
Date	06/16/05	
Start Time	09:20 a.m.	
GPS reading (0 m)	WPT 528 N 20° 7.090' W 155° 36.248'	
GPS reading (100 m)	WPT 531 N 20° 6.387' W 155° 35.774'	
Observers	Hiniwa	
Comments	Ranbikapu I'ini Alan Olu Kupono Kaiti Myra	

Transect # 0	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	0.65	0.35	0.55	1.15	1.8	2.1	1.35						
Water Speed	0	m	sm	sm	m	m	m	s						
Substrate Size	s	s	sm	sm	m-l	s	L	s						
Other maj. feat.	SB							SB						

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	0.4	1 ft.	0.4	1.3	1.5	2 ft.								
Water Speed	s	mf	m	mf	mf	m								
Substrate Size	s	s	m	s	s	s								
Other maj. feat.	SB					SB								

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	0.25	0.3	1.4	0.5	0.15	0.3	0.9	0					
Water Speed	0	sm	mf	mf	s	ms	mf	m	0					
Substrate Size	s	sm	L	ml	SL	ml	L	sm	L					
Other maj. feat.	SB								SB					

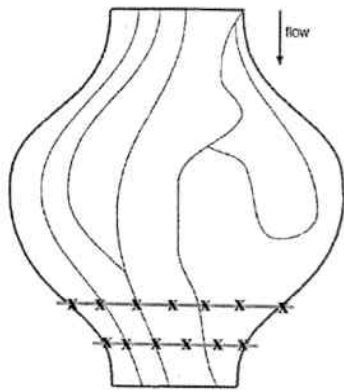
Transect #	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0.9	1.05	0.9	0.4	1.2	0.7	0.2							
Water Speed	s	m	m	m	m	m	m							
Substrate Size	s	s	s	L	s	s	s							
Other maj. feat.	SB						SB							

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hirilawe Stream	Stream Mapping Data Sheet 
Date	June 16, 2005	
Start Time	10:56 AM	
GPS reading (0 m)	WPT 532 N 20°06.384' W 155°35.770'	
GPS reading (100 m)		
Observers	Honi, Lanakila, Moana, Moani, Milihani, Kama	
Comments		

Transect # 0	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	0.65	0.4	0	0.2	0.25	0	0	0.25	0.65	0				
Water Speed	Med	Med	0	Med	Fast	0	0	F	F	0				
Substrate Size	Sm/L	Sm	0	L	L	L	L	Sm/L	M/Sm	M				
Other maj. feat.	SB		Pipe	Big Rock	Big Rock	Big Rock	Big Rock			SB				

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	0	0.35	0	1.5	0	0.7	0.6	0.2	0					
Water Speed	LOW	S/M	0	M/F	0	Med	Med	M/F	0					
Substrate Size	Sm	Sm	Lg	Lg	Lg	S/L	S	S	Lg					
Other maj. feat.	SB		Big Rock	Big Rock	Big Rock	Big Rock	Plant		Big Rock					

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	0.3	0.1	0	0.9	0.6	0.7	0.5						
Water Speed	LOW	S	M/F	0	F	F	F	M/F						
Substrate Size	M	S	L	L	L	LR	M	M						
Other maj. feat.	SA			LR	BR	LR	VR	SP						

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name		Stream Mapping Data Sheet	
Date	6-11-05		
Start Time	12:58		
GPS reading (0 m)	Wpt 534 N 20° 16.368' W 155° 35.771'		
GPS reading (100 m)	Wpt 535 N 20° 16.348' W 155° 35.776'		
Observers	O'opus		
Comments	Kaley, Polani, Hiilei Miles Tish		

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	0.65	0.55	0	1.93	0.0	0.1								
Water Speed	slow med	slow med	0	med	0	med								
Substrate Size	lrg.	med-lrg	lrg	mass	0	sm								
Other maj. feat.	sb.		big rock		L rock									

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	1.25	1.15	0.8	0.8	0	0.5	0.55	0				
Water Speed	slow med	med slow	med fast	med fast	med	slow med	0	slow	med slow	0				
Substrate Size	LS	SL	S	ML	ML	ML	ML	L	L	L				
Other maj. feat.	sb						big rock		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	0.27	0	0.5	0	0.9	0.5	0.6	0.8	0.55	0.6	0.1	0	0	0.2
Water Speed	slow	0	med	0	fast	fast	fast	fast	med	med	fast	0	0	med
Substrate Size	Large	Large	small	Large	Large	small	Large	small	med	small	Large	Large	Large	Med
Other maj. feat.	S.b.	Boulder		Boulder							Boulder	branch	Boulder	sb

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hi'ilawe	Stream Mapping Data Sheet
Date	June 16/2005	
Start Time	2:09	
GPS reading (0 m)	NPT 536, N 20° 6.359' W 155° 35.755'	
GPS reading (100 m)	NPT 537 N 20° 6.356' W 155° 35.755'	
Observers	Hui 'Opae	
Comments	Keakula Lakela Kaleo Kaniela Pono Honu	

Transect # 0	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	0.5	0	0.7	0.2	0.4	0.3	0.4	0	0.1	0.5	0.6	0	0.8
Water Speed	med	med	0	S/M	M/F	fast	slow	slow	slow	slow	medium	medium	0	medium
Substrate Size	m/L	large	Large	Large	Large	Large	M/L	M/L	M/L	S/M	M/L	M/L	none	none
Other maj. feat.	SB	leaves	boulder	boulders	boulders	boulders	twigs	leaves	Boulders	SB	SB	leaves	leaves/B	Boulders sp

Transect # 14	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													
Water Speed	slow													
Substrate Size	SM													
Other maj. feat.	sp													

Transect # 14	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	0.5	0	0	0.3	0.75	0.39	0.5	0.1	0.4	0.69	0.4	0.4	0.1	0.4
Water Speed	S	0	F	F	M	S	S	S-M	slow	slow	slow	med	med	slow
Substrate Size	S-L	L	L	L	M-L	L	small	med-L	M-L	M-L	L	S-M	L	S
Other maj. feat.	stream bank	Boulder	Boulder	Boulder	Boulder	Boulder	sand	Boulder	Boulder	Boulder	Boulder	Boulder	Boulder	Boulder

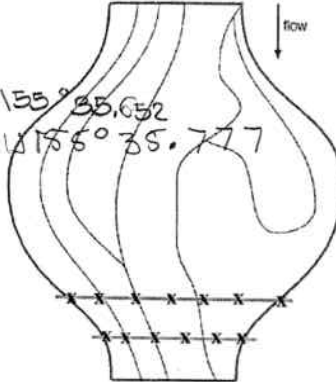
Transect # 14	0 m	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0.4													
Water Speed	slow													
Substrate Size	M-L													
Other maj. feat.	SB													

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hi'ilawe	Stream Mapping Data Sheet 
Date	8/30/05	
Start Time	9:05 am - 10:05 am	
GPS reading (0 m)	WB+ 539 N 20° 06.37' W 155° 35.652	
GPS reading (100 m)	WB+ 540 N 20° 06.385 W 155° 35.777	
Observers	Kaily, Iliana, Hony, Polani	
Comments	Kaiubani, Myra Sunny day	

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	0.1	0.6	0.85	0.45	0.65	2.1	1.5	0.4						
Water Speed	S	M	S	M	S	M	M	F						
Substrate Size	LMS	MS	M,S	M	L	M,L	M,L							
Other maj. feat.	Bank							Bank						

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	0.5	0.4	1.17	1.5	0.4								
Water Speed	S	MF	M	S	F	F								
Substrate Size	S	ML	MS	ML	SM	L								
Other maj. feat.	Bank					other 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	0.01	0.04	0.7	0.8	0.6	0	1.2	0.3	0.2					
Water Speed	S	F	F	F	S	O	F	M	S					
Substrate Size	S	SM	M	L	L	L	L	M	S					
Other maj. feat.	Bank				Boulders	Boulders			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	0.05	0	0.4	0.01	0.02	0.06	0	0.2						
Water Speed	S	0	F	S	M	F	0	S						
Substrate Size	SM	L	ML	SL	L	L	L	S						
Other maj. feat.	bank	big boulder					Bank	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	0.01	0.07	0.03	0.08	0	0	0.03	0	0.02					
Water Speed	S	F	F	M	0	0	M	0	F					
Substrate Size	MS	ML	L	L	L	L	ML	L	ML					
Other maj. feat.	bank				Bedrock	Boulders								

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name	Hilawe	
Date	August 30, 2005	
Start Time	10:11 am	
GPS reading (0 m)	N 20° 06.380 W 155° 25.770	
GPS reading (100 m)	N 20° 06.363 W 155° 35.754	
Observers	Honi, Hiikei, Iini, Kaleo	
Comments		

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	0.6	1 ft	1.1 ft	0	0.3	0	0						
Water Speed	S/M	M/S	S/L	L/M	0	S/M/L	0	0						
Substrate Size	S	M/F	F/M	F/M	0	M/F	0	0						
Other maj. feat.	Stream Bank				Big Rock		Big Rock	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	0.15	0	0	0.2	1 ft	0.2	0.35							
Water Speed	S	0	0	m/f	f	f	S/m							
Substrate Size	S	0	0	L	ml	ml	S/m							
Other maj. feat.	S B	Big rock	Big rock				S B							

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	1.65	1.25	0.05	1.1	0	0.5								
Water Speed	S/m	m	m	f	0	S								
Substrate Size	S/m	S/L	L	L	0	S								
Other maj. feat.	Stream Bank				Big Rock	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	0.5	1	1.5	0.7	0	0	0	0					
Water Speed	0	S/m	M/F	M/F	F/M	0	0	0	0					
Substrate Size	0	S	S/L	S/L	S/M	0	0	0	0					
Other maj. feat.	Stream Bank					Big Rock	Big Rock	Big Rock	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	14 m
Est. Depth	0.15	0	0.15	0	0.2	0.5	0.75	0.8	0.2	0.1	0.3	0	0.5	0.3	0
Water Speed	0	0	S/L	0	M/F	F	M/F	M/S	L	F	M	0	S	S	0
Substrate Size	0	0	M/S	0	S/L	S/M	S	M	M/S	L	L	0	S	S	0
Other maj. feat.	Stream Bank	Big Rock		Big Rock								Big Rock			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	14 m
Est. Depth	0.15	0.6	0	0	0.45	0.2	0.8	0	0.25	0	0	0.45	0	0	0.35
Water Speed	0	S	0	0	mf	f	f	0	S	0	0	mf	0	0	ms
Substrate Size	S	S/L	0	0	ml	L	L	0	S/L	0	0	ml	0	0	ml
Other maj. feat.	S B		Big rock	Big rock				Big rock		Big rock	Big rock	Big rock	Big rock	Big rock	S B

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

14L

Stream Name	HITLAWE	
Date	AUGUST 31, 2005	
Start Time		
GPS reading (0 m)	N 20° 6.366 W 155° 35.751	
GPS reading (100 m)	N 20° 06.350 W 155° 35.741	
Observers	J.D., K.B., L.S., K.G.	
Comments		

WPT 543

WPT 544

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	0.3 ft	0 ft	1.15 ft	1 ft	1.1 ft	0.25	0 ft	0.8 ft	0.1 ft	0.8 ft	0	0.5 ft	0.2 ft	0
Water Speed	S	0	M	F	F	S/M	0	S	M	S	0	S/M	S	0
Substrate Size	M	L	M/L	S/M	S/M/L	S	L	S/M	M	S	L	S	fine	fine
Other maj. feat.	STREAM					BOULDER					Bolder			

BANK

Transect # 2	140 m	150 m	160 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 ft	0 ft	0.1 ft											
Water Speed	M	0	S											
Substrate Size	M/L	L	S/M											
Other maj. feat.		BOULDER	STREAM											

EDGE

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	0.7 ft	1.1 ft	0.9 ft	0	0	0.1 ft	0.5 ft	0.6	0.5	0.25	0.45	0.4 ft	0	0
Water Speed	M/F	F	M	0	0	S	S	S	S	S	S	S	0	0
Substrate Size	L	M/L	S/M/L	L/M/S	S/M	L	M	S	L	S/M/L	S/M	M/L	S/M	S/L
Other maj. feat.	STREAM					bed								

BANK

16.1 m

rocky

Transect #	140 m	150 m	160 m	170 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 ft	0.9 ft	0.1 ft	0.1	0									
Water Speed	S	M	S	S										
Substrate Size	S/M/L	S/M/L	M/L	M/L										
Other maj. feat.	boulder			Stream										

edge

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 ft	1.1 ft	0.2 ft	0.5 ft	0 ft	0 ft	0.1 ft	0.7 ft	0.3 ft	0.2 ft	0 ft	0.2	0	0
Water Speed	S	M/F	F	M/F	0	0	S	F	M/F	S	0	S	0	0
Substrate Size	M/L	L	L	S/M/L	L	L	S/M/L	M/L	M/L	S/M	S/M	L/M/S	S/M	L
Other maj. feat.	STREAM	BOULDER	BOULDER		BOULDER	BOULDER	BOULDER							Boulder

EDGE

Transect #	140 m	150 m	160 m	170 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m
Est. Depth	0.5 ft	0.4 ft	0.5	0										
Water Speed	S	S	M	0										
Substrate Size	S/M/L	S/M/L	M/L	M/L										
Other maj. feat.				Stream										

Edge

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

Stream Name: Lalak ea

Date: 10/17/05

Start Time: 12:07 p.m.

GPS reading (0 m): 353

GPS reading (100 m): 356

Observers: Da Nopilis

Comments: Kaili, Hona, Polani, Iliana, Kailani, Myran.

Stream Mapping Data Sheet

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	0.85	0.00	1.01	1.7	0.35	2.15	1.65	2.00	0.8					
Water Speed	S	0	S	S	S	S	S	S	S					
Substrate Size	S, M	L	S, L	M, L	L	S, M	S, M	L	L					
Other maj. feat.	stream bank	large rock	0	0	0	0	0	0	0					

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	0.2	1.2	2.8	4.0	4.1	4.4	0.05							
Water Speed	S	S	S	S	S	S	S							
Substrate Size	S	S	SM	SM	M	L	L							
Other maj. feat.	0	0	0	0	0	0	Boulder							

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	0.05	0.81	1.55	0.42	3.2	5.2	3.15							
Water Speed	S	S	S	S	S	S	M							
Substrate Size	S	M, L	S, L	L	M, L	M, L	L							
Other maj. feat.	edge stream	0	large rock	bed rock	large rock	0	stream edge							

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	1.15	1.8	2.2	1.9	0.35									
Water Speed	S	M	S, M	F	S									
Substrate Size	S	M, L	L	M, L	L									
Other maj. feat.	stream edge	0	0	0	Boulder									

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

group #2

Stream Name	Lalakea	Stream Mapping Data Sheet
Date	10/17/05	
Start Time	1:55 PM	
GPS reading (0 m)	357	
GPS reading (100 m)	0	
Observers	Kanicia, Lelehu, JD	
Comments	1520.088700 w 155.600000 Kaiulani, Myra,	

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	0	0.2	0.5ft	1.05ft	0.5ft	1.5ft	0	0						
Water Speed	0	slow	s	m	m	m	f	0						
Substrate Size	m	m/l	L	m	L	s/m/L	L	L						
Other maj. feat.	stream	stream	0	0	0	0	Boulder	Boulder						

Bank Bank

Stream edge

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	0.8ft	2.0ft	0.2ft	0ft	0.5ft	0ft							
Water Speed	0	F	F	S	0	0	0							
Substrate Size	L	L	L	L	L	L	L							
Other maj. feat.	Bed-	Bed-	Bed-	Boulder	Bed-	Bed-	Bed-							

Rock Rock Rock Bedrock Rock Rock / Stream edge

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	0	6.5ft	1.3ft	0	0.5ft	1.5ft	1.2ft	1.35ft	0	0			
Water Speed	0	0	m	f	0	m	s	m	s	0	0			
Substrate Size	L	L	s/L	s/L	L	L	s/L/L	s	m/s	L	s/m			
Other maj. feat.	Boulder	Boulder	Boulder	0	Boulder	Boulder	Boulder	0	bed	Boulder	Stream			

Stream edge

Rock

Edge

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	0ft	0ft	0.6ft	0.8ft	1.9ft	1.1ft	0							
Water Speed	0	0	s	s	s	s	0							
Substrate Size	L	L	s/m	s/m/L	L/m	L	L							
Other maj. feat.	Stream	0	0	0	Boulder	Boulder	Stream							

Edge/Boulder

edge

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)

group #3

Stream Name	Lalakea	Stream Mapping Data Sheet
Date	10/17/05	
Start Time		
GPS reading (0 m)	358	
GPS reading (100 m)	359	
Observers		
Comments	Kaiulani, Myra Iini, Hiilei, Kaleo, JR	

N 20.08832°
W 155.60051°
N 20.08813
W 155.60060

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	0	0	1.4	0.1	3.7	0.9								
Water Speed	0	0	Sm	mf	f	sm								
Substrate Size	L	L	ML	L	L	L								
Other maj. feat.	SB	Big rock	0	Big rock	0	SE								

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	0.4	1.2	0.4	0	0	0								
Water Speed	m	f	f	0	0	0								
Substrate Size	L	m	L	L	L	L								
Other maj. feat.	getridges	0	bedrock	bedrock	bedrock	bedrock								

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	1.2ft	1.6ft	1.4ft	1.0ft	0	0.2ft	0						
Water Speed	0	S	S	M	M	0	S	0						
Substrate Size	L	sm	4L	LS	L	L	L	L						
Other maj. feat.	streambank	0	0	0	0	Big rock	rocks	Bedrock						

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

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														
Water Speed														
Substrate Size														
Other maj. feat.														

Water Speed (fast, medium, slow)

Substrate Size (small, medium, large)