

FIELD EQUIPMENT VERIFICATION (PRE/POST A WEEKLY SAMPLING):

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
66	Maxwell, C, Banker, B.	12/2/19	9:45	Maxwell, C, Banker, B.	12/6/19	11:10am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST 3	n/a	n/a	Std Val	NIST 22.8 °C	NIST 22.3 °C	NIST 22.1 °C	NIST °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	1	3	n/a		22.5		21.9				
	1	2	n/a			22.0 °C					
Salinity			3 months	Std Val	Tap water	Salin Std 9/20/19 date 34.3 ppt	Tap water	Salin Std 9/20/19 date 34.3 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	1	3	10/7/19		0.03	34.2	0.04	34.1			
	1	2	10/7/19		0.04	34.5					
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	5/13/19		101.6 %		102.6 %				
	1	2	8/5/19		97.5 %						
pH			3 weeks	Std Val	pH 7.00	pH 10.00	pH 7.00	pH 10.00	± 0.1 pH of pH std value	Compare to Manufacturer pH Std value on bottle	
	1	5	12/2/19		7.04	10.05	7.07	10.09			
	1	6	12/2/19		7.03	10.06					
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 5.57 NTU	BLANK <0.1	LOW 1-10 5.57 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1	n/a	10/28/19		0.05	5.58	0.07	5.60			
		n/a									

QA: * Are pre- and post within one week?
* Delay times are ok?
* Other equipment issues?

Team	R2RS	Samplers (Last Name, 1st Initial) Kranberg, J, Jarmakani, B, Maxwell, C Harcrow, NCM	Meters and Probes ID				
Session	66		HQ40d:	1	2100Q:	1	
Date	12/3/19		pH:	5	DO:	1	Salinity:

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Napili Bay RNS191203	N	8:10 AM	25.9	36.1	6.74	100.9	8.18	1.4	1.4	1.46	0	0	0
Pohaku RPO191203	N	8:50 am	25.5	35.8	6.78	101.1	8.15	29.4	31.9	30.8	0	0	0
Kaanapali Sh RKS191203	\	9:18 am	26.1	35.7	6.83	103.0	8.17	2.98	3.27	3.33	1	5	0
Canoe Beach RCB191203	N	9:47 AM	27.1	35.7	6.67	102.2	8.21	1.41	1.58	8.34 1.59	8	6	0
Wahikuli RWA191203	\	10:13 AM	27.1	35.4	6.69	102.5	8.22	7.21	6.73	6.97	1	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).
Use the back of the form if needed.

RNS: Raining & high Surf; D.O & Salinity probes not reading properly in first test / worked 2nd time

RPO - large waves, surfers way out
monkey patch far out, to the surfers

RKS - a lot of water movement, 1-2 ft surfs

RCB: Calm, clear skies

RWA: Calm; D.O and salinity probes not reading properly in first test (repeat problem from RNS) / worked the 2nd time

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.57	58.9	635
Pre-sampling	0.07	5.57	59.2	636
Post-sampling	0.06	5.57	59.0	634

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	LHS	C Maxwell
Bacteria	-	-	-

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Natalie Harcrow - potential Volunteer

Team	R2RS	Samplers (Last Name, 1st Initial) Kranberg, J., Jaitmakani, B, Morgan, T., Haddock, N. cm
Session	66	
Date	12/3/19	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS191203-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO191203-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS191203-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:18am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB191203-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:47am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA191203-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:13am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

Sediments							
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Printed Name:

Catherine Maxwell

Catherine Maxwell

Team	Polanui	Samplers (Last Name, 1st Initial)	Maxwell, J Harris, K Banker, B	Meters and Probes ID			
Session	66			HQ40d:	1	2100Q:	1
Date	12/04/2019			pH:	5	DO:	1

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
505 Front St PFF191204	Y	8:22	26.6	34.6	6.39	96.6	8.09	2.77	2.87	2.59	0	15	0
Lindsey Hale PLH191204	N	08:51	26.2	35.5	6.36	96.1	8.10	6.09	6.51	6.43	0	0	0
Lahaina Town PLT191204	—	9:12	26.3	35.1	6.17	93.2	8.11	31.2	30.6	29.5	0	0	0
Olowalu Pier OSF191204	—	9:46	26.8	35.9	6.74	103.1	8.09	0.80	1.03	1.01 th +59	0	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).
Use the back of the form if needed.

DO NOT TAKE NUTRIENT SAMPLE FROM OLOWALU PIER THIS EVENT
(Will Only Be Taken Quarterly)

PFF - stream flowing light.
OSF - 4th turbidity reading taken
(1.01)

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	5.57	58.9	635
Pre-sampling	0.08	5.57	59.1	635
Post-sampling	0.05	5.55	59.0	633

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	3	LLHS	BH BANKER
Bacteria	-	-	-

Signature (Team Lead):

BH.Banker

Printed Name:

BRUCE H. BANKER

Team	Polanui	Samplers (Last Name, 1st Initial)	MAXWELL, J HARRIS, K BANKER, B
Session	66		
Date	12/04/2019		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF191204-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:22	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLH191204-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:51	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLT191204-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	

Sediments							
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):



Printed Name:

BRUCE H. BANKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	NOPONEN, R GUND, K KANIERI, L BANKER, B	Meters and Probes ID			
Session	66			HQ40d:	1	2100Q:	1
Date	12/05/2019			pH:	5	DO:	1

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Martin Hale OPM191205	N/A	0714	24.9	35.9	5.63	83.4	7.98	1.74	1.85	1.75	0	0	0
Camp Olowalu OCO191205	N/A	0733	24.9	35.9	6.25	92.6	8.10	2.17	1.99	2.03	3	1	0
Ukumehame OUB191205	N/A	0748	25.4	36.1	6.43	96.2	8.12	5.31	5.05	4.94	0	0	0
Papalaua Beach OPB191205	N/A	0803	25.0	36.1	6.64	98.6	8.12	4.77	4.51	4.70	0	0	0
Papalaua Pali OPP191205	N/A	0815	25.5	35.5	6.41	95.8	8.10	5.88	6.14	6.45	0	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).
Use the back of the form if needed.

DO NOT TAKE NUTRIENT SAMPLES THIS EVENT

(Will Only Be Taken Quarterly)

Fairly windy weather today - sign on side
of car blew off and was lost - FOUND
HEAVY CLOUD COVER

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.57	58.9	635
Pre-sampling	0.07	5.59	59.1	636
Post-sampling	0.05	5.53	59.0	634

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0	N/A	N/A
Nutrients	0	N/A	N/A
Bacteria	0	N/A	N/A

Signature (Team Lead):

BH.B

Printed Name:

BRUCE H. BANKER

Team	Olowalu	Samplers (Last Name, 1st Initial) NOPOMEN, R GUND, K RAVIERI, L BANKA, B
Session	66	
Date	12/05/2019	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							

Sediments							
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

BKA

Printed Name:

BKA.BANKA

Team	R2RN	Samplers (Last Name, 1st Initial) <i>Maxwell, C</i> <i>Banker, B</i> <i>Hutchings, L</i> <i>Hehemann, C</i>	Meters and Probes ID				
Session	66		HQ40d:	1	2100Q:	1	
Date	12/6/19		pH:	5	DO:	1	Salinity:

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Honolua Bay RHL191206	Y	8:00am	25.0	34.8	6.31	93.6	8.14	30.9	31.3	27.9	0	0	0
Oneloa Bay RON191206	—	8:40am	25.9	35.9	6.80	102.7	8.19	.98	1.09	1.01	0	2	0
Kapalua Bay RFS191206	—	9:05am	26.0	35.3	6.78	102.0	8.17	3.07	2.92	2.87	0	0	0
Ka'opala Bay RKO191206	N	9:26	25.3	34.9	6.82	101.0	8.12	19.7	19.6	18.9	0	0	0
Kahana Village RKV191206	—	9:48	25.5	35.4	6.87	102.6	8.16	10.7	11.4	10.8	0	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).

Use the back of the form if needed.

RHL - small amount of stream flow - raining
 stream flowing into ocean - not sure
 RON - large wave keiki bowls
 not really close to shore
 raining a little
 heavier here - large waves on shore
 waves peak at ~ 50 ft out ~ 5 feet
 wrote turbidity in PH - crossed out - Lt
 RKO - not much rain, waves breaking far outside
 shore is surging - some small leaves in
 no rain water

BB - present for 1st site (RHL) only

TURBIDITY VERIFICATION

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Post-sampling	0.07	5.60	59.2	635

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	LLHS	C Maxwell
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

Catherine Maxwell

Catherine Maxwell

Team	R2RN	Samplers (Last Name, 1st Initial) Maxwell, C Ranker, B Hutchings, L Hehemann, C
Session	66	
Date	12/6/19	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL191206-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON191206-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS191206-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO191206-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:26am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV191206-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:48am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

Sediments							
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Printed Name:

Catherine Maxwell

Catherine Maxwell