

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
81	M. Beeson, G. Silver, J. Strickland	12/14/20	11:55	M. Beeson, J. Strickland	12/17/20	10:45

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST	n/a	n/a	Std Val	NIST	NIST	NIST	NIST	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
					26.2 °C	26.3 °C	°C	26.6 °C			
	GS	21	2	n/a	26.0						
		21	3	n/a		26.1		26.4			
Salinity			3 months	Std Val	Tap water	Salin Std	Tap water	Salin Std	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
						Avg 24 date		Avg 24 date			
						35 ppt		35.0 ppt			
	21	3	11/30/20		0.04	35.1	0.04	35.2			
	21	2	11/30/20		0.04	35.1					
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	21	31	9/28/20		99.1		97.9				
	21	2	9/8/20		102.0%						
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	
	21	6	11/30/20		7.02	9.97					
	21	5	11/30/20		7.00	9.97	7.02	9.98			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10	BLANK <0.1	LOW 1-10	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1	n/a	11/30/20		0.08	5.69	0.09	5.70		LOW: 5.68	
	NBBF	n/a	11/30/20		0.07	5.79				LOW: 5.79	

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

Lab: PKL (Papakea Lab)



Team	R2RS	Samplers (Last Name, 1st Initial)	J. Strickland. G. Silver J. Kranberg	C. Gallagher	Meters and Probes ID		
Session	81				HQ40d: 1	2100Q: 1	
Date	12/15/2020				pH: 5	DO: 1	Salinity: 3

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 RNS201215	N	8:16am	25.3	35.1	6.65	98.7	8.08	1.06	1.61	1.46	Ø	1	Ø
Pohaku RPO201215	N	8:43	25.2	34.6	6.59	97.2	8.10	5.50	5.28	5.24	5	6	Ø
Kaanapali Shores RKS201215	N	9:03	25.4	35.0	6.58	97.7	8.10	2.95	2.90	2.63	5	9	Ø
Kahekili Beach Two RKT201215	N	9:25	25.9	34.4	6.57	98.0	8.11	2.25	2.50	2.77	<sup>GS</sup> Ø 1	5	Ø
Canoe Beach RCB201215	N	9:50	25.9	<sup>GS</sup> 34.4 <del>35.4</del>	6.70	100.1	8.13	1.60	1.72	1.66	1	Ø	Ø
Wahikuli RWA201215	N	10:10	26.1	34.0	6.61	98.9	8.13	<del>5.12</del> <sup>CMY</sup> 3.26	3.96	3.15	1	4	Ø

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

RNS - Small waves near shore, sunny, pavement wet (recent rain)

RPO - Waves breaking 100ft out, over cast

RKS - Overcast, small waves, families on beach

RKT - Overcast, relatively flat ocean, people walking back & forth

RCB - Sunny, 1-1.5 ft waves, road maintenance next to beach

RWA - Smells like trash, shore break waves

#### TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.08	5.68	57.9	608
Pre-sampling	0.08	5.91	58.0	608
Post-sampling	0.09	5.87	57.9	608

#### CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	6	PKL	G. Silver
Bacteria	-	-	-

Signature (Team Lead):

*Grace Silver*

Printed Name:

Grace Silver



<b>Team</b>	R2RS	<b>Samplers (Last Name, 1st Initial)</b>	J. Strickland C. Gallagher G. Silver J. Kranberg
<b>Session</b>	81		
<b>Date</b>	12/15/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
RNS201215-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO201215-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS201215-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:03	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT201215-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB201215-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA201215-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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):

Grace Silver

Printed Name:

Grace Silver



<b>Team</b>	Polanui	<b>Samplers</b> (Last Name, 1st Initial)	R Bayley, K. Gund, K. Harris J Strickland	<b>Meters and Probes ID</b>		
<b>Session</b>	81			HQ40d:	2100Q:	
<b>Date</b>	12/16/2020			pH: 5	DO:	Salinity: 3

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 PFF201216	Y	8:18	25.4	34.1	6.13	90.8	8.04	9.67	9.82	9.46	0	0	0
Lindsey Hale PLH201216	N	8:38	25.5	34.6	5.99	88.9	8.03	12.3	12.5	12.5	0	1	0
Lahaina Town PLT201216	—	8:53	25.9	34.7	5.60	83.6	8.02	9.76	9.16	9.82	0	0	0
Olowalu Pier OSF201216	— KLH	9:25 <del>8:25</del>	25.7	35.0	5.97	88.9	8.00	2.46	2.51	2.81	2	boats 3	0
Camp Oluwalu OCO201216	—	9:36	25.7	35.0	6.06	90.6	8.06	1.16	1.31	1.16	0	3	0
Papalaua Pali OPP201216	—	9:58	26.6	35.0	6.67	101.0	8.11	11.6	11.3	11.7	1	0	0

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

Use the back of the form if needed.

OSF Filming in progress. 2 jet skis in water + 2 guys holding them. 3 in boat or on shore.

OPP site moved ~80 ft to right of previous site. Large rock in water ~30 in (out in water). Reason for moving was the water was tossing rocks + hurting the volunteers

**TURBIDITY VERIFICATION**

	Blank (must be <0.10)	Low	Med	High
Standard	0.09	5.68	57.9	608
Pre-sampling	0.09	5.71	57.9	608
Post-sampling	0.08	5.65	58.2	609

**CHAIN OF CUSTODY INFORMATION**

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	6	PKL	M. Beeson
Bacteria			

Signature (Team Lead):

M. Beeson

Printed Name:

Meredith Beeson



<b>Team</b>	Polanui	<b>Samplers (Last Name, 1st Initial)</b>	<del>R.</del> Bayley, R. Gund, K. Harris, K. Strickland, J.
<b>Session</b>	81		
<b>Date</b>	12/16/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
PFF201216-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH201216-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:38	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT201216-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF201216-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP201216-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO201216-N-1	Camp Oluwalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:58	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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):

MBeeson

Printed Name:

Meredith Beeson



Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L. Beeson, M. Berg, L.	Meters and Probes ID			
Session	81			HQ40d:	1	2100Q:	1
Date	12/17/2020			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		8.58	8.82	8.57	water	beach	camp
Honolua Bay RHL201217	N	8:05A	24.9	34.8	6.41	94.4	8.12	6.35	8.96	7.92	0	0	0
Oneloa Bay RON201217	N	8:45A	25.3	35.1	6.71	99.6	8.14	1.51	1.24	1.20	3	2	0
Kapalua Bay RFS201217	N	9:05A	25.4	35.0	6.70	99.5	8.11	2.32	2.20	2.85	5	8	0
Ka'opala Bay RKO201217	N	9:24	25.3	34.7	6.51	96.4	8.08	8.60	9.96	8.47	0	0	0
Kahana Village RKV201217	N	9:40	25.5	34.7	6.73	100.0	8.12	6.99	7.39	6.70	0	0	0

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

Turbidity RHL-Second set: 8.58, 8.82, 8.57  
• after cleaning off bottle

RON: 4th turbidity: 1.08 NTU

RKO: water is pretty brown/murky  
4th Turbidity 7.90 / 9.02 / 8.48

#### TURBIDITY VERIFICATION

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Post-sampling	0.09	5.70	58.1	609

#### CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	PKL	M. Beeson
Bacteria	-	-	-

Signature (Team Lead):

M. Beeson

Printed Name:

Meredith Beeson

<b>Team</b>	R2RS	<b>Samplers (Last Name, 1st Initial)</b>	Hutchings, L. Beeson, M. Berg, L.
<b>Session</b>	81		
<b>Date</b>	12/17/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
RHL201217-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON201217-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS201217-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO201217-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:24	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV201217-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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):

mBeeson

Printed Name:

Meredith Beeson