

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
85	M. Beeson, G. Silver	03/15/21	12:00	M. Beeson	3/18/21	11:20

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	
	2	2	n/a		24.6 °C	24.5 °C	23.5 °C	— °C			
	2	2	n/a		23.9		22.8			Used west side NIST (>0.6 difference)	
	2	3	n/a			23.8		—		Used west side NIST (>0.6 difference)	
Salinity			3 months	Std Val	Tap water	Salin Std 8-24 date 35.0ppt	Tap water	Salin Std 8-24 date 35.0ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	2	2	3/15/21		0.31	34.9	0.32	35.0			
	2	3	3/15/21		0.31	34.9	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	2	2	9/28/20		100.3 %		101.3 %				
	2	1	9/28/20		99.1 %		—				
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	
	2	6	3/15/21		7.02	10.00	7.02	10.01			
	2	5	3/15/21		7.00	9.98	—	—			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 NTU	BLANK <0.1	LOW 1-10 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	NBBF	n/a	3/15/21		0.08	5.71	0.09	5.74		Low NTU = 5.75	
	1	n/a	3/15/21		0.09	5.75	—	—		Low NTU = 5.77	

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

Lab = KAL

Team	R2RS	Samplers (Last Name, 1st Initial)	G. Silver M. Beeson C. Gallagher	Meters and Probes ID		
Session	85			HQ40d: 2	2100Q: NBBF	
Date	03/16/2021			pH: 6	DO: 2	Salinity: 2

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 RNS210316	N	8:14	24.6	34.8	6.90	100.4	8.19	2.19	2.11	2.09	1	14	0
Pohaku RPO210316	N	8:40	24.4	32.9	6.98	100.3	8.14	17.2	16.8	17.06 ^{GS} 16.4	0	2	0
Kaanapali Shores RKS210316	Y	9:02	24.5	34.5	6.95	100.9	8.18	3.76	3.73	3.81 ^{GS} 4.72	0	0	0
Kahekili Beach Two RKT210316	N	9:18	24.8	34.8	6.87	100.5	8.16	4.06 ^{GS} 4.31	3.93	3.89	3	3	0
Canoe Beach RCB210316	N	9:41	24.6	33.0	6.97	100.5	8.18	2.26	2.15	2.11	3	2	0
Wahikuli RWA210316	N	10:00	24.5	33.3	6.94	100.0	8.20	2.70 ^{MB} 1.75	1.90	1.93	1	0	0

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

Use the back of the form if needed.

RNS - high surf

RPO - high surf, sunny

RKS - higher tide than normal; 2 fishermen above beach (not on sand)

RKT - sunny, big waves crashing near shore

RCB - lots of debris on shore (kukui nuts, driftwood, etc)
starting to drizzle towards end of sampling

RWA - 1 SUP

Rained in Kahana last night; Rained hard on Saturday

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.08	5.75	59.4	605
Pre-sampling	0.10 ^{GS} 0.09	5.75	58.2	608
Post-sampling	0.09	5.73	59.0	604

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Meredith Beeson

Printed Name:

Meredith Beeson

Lab: KAL

Team	R2RS	Samplers (Last Name, 1st Initial)	G. Silver
Session	85		M. Beeson
Date	03/16/2021		C. Gallagher

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
RNS210316-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:14	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO210316-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS210316-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:02	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT210316-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB210316-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:41	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA210316-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

		<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		

Lab = KAL

Signature (Team Lead): Grace Silver	Printed Name: Grace Silver
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Team	Polanui	Samplers (Last Name, 1st Initial)	M. Beeson G. Silver K. Gund y. Mayen (observing)	Meters and Probes ID		
Session	85			HQ40d: 2		2100Q: NBBF
Date	03/17/2021			pH: 6	DO: 2	Salinity: 2

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 PFF210317	Y	8:13	23.9	34.1	6.33	90.8	8.06	4.32	4.30	4.19 ^{GS} 4.87	0	4	0
Lindsey Hale PLH210317	Y	8:39	24.4	33.9	6.09	87.7	8.07	8.00	7.39	8.51	0	2	0
Lahaina Town PLT210317	N	8:55	24.8	33.9	6.04	87.9	8.08	15.5	14.3	14.4	1	1	0
Olowalu Pier OSF210317													
Camp Oluwalu OCO210317	N	9:20	25.0	34.6	6.31	92.5	8.07	1.76	1.80	1.79 ^{GS} 2.08	0	0	0
Papalaua Pali OPP210317	N	9:39	24.2	34.1	6.87	99.0	8.11	21.2 ^{MB} 20.8	21.7	21.6	0	0	0

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

RAINED ON WEST SIDE OVERNIGHT.

LARGE PUDDLES AT 505.

MULTIPLE ATTEMPTS PRE-SAMPLING BLANK
WOULD NOT DROP BELOW 0.10.

PFF - sunny, small waves, running stream

PLH - 3-4' OF DOWNCUTTING AT "STREAM"
PICTURE TAKEN BY GRACE; 4^m reading 6.93

PLT - guy in water w/ kayaks; kayak, canoe, SUP further offshore
" - 4th Reading Turbidity 13.3

OCO - slightly drizzling, calm water

OPP - very brown/dark water, medium waves, high wind
evidence of previous flow from mountains...
small channels towards water.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.09	5.75	59.4	605
Pre-sampling	0.10	5.71	58.3	605
Post-sampling	0.09	5.73	59.2	605

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	—	—	—
Nutrients	5	KAL	M. Beeson
Bacteria	—	—	—

Signature (Team Lead):

Meredith Beeson

Printed Name:

Meredith Beeson

Lab: KAL

Team	Polanui	Samplers (Last Name, 1st Initial) Beeson, M. Silver, G. Gund, K. Mayer, Y. (observing)
Session	85	
Date	03/17/2021	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
PFF210317-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:13	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH210317-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:39	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT210317-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSE210317-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	 	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP210317-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO210317-N-1	Camp Oluwalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:39	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

		<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): M Beeson	Printed Name: Meredith Beeson
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Team	R2RN	Samplers (Last Name, 1st Initial)	Berg, L Hutchings, L	Meters and Probes ID		
Session	85			HQ40d: 2	2100Q: NBBF	
Date	03/18/2021			pH: 6	DO: 2	Salinity: 2

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 RHL210318	Y	8:00A	22.5	28.2	6.98	94.3	8.11	19.7	18.9	19.1	0	0	0
Oneloa Bay RON210318	N	8:40A	23.6	34.9	7.03	100.7	8.17	1.98	1.89	1.83	0	1	0
Kapalua Bay RFS210318	N	9:00A	23.7	34.5	6.99	100	8.15	2.20	1.87	2.60	2	6	0
Ka'opala Bay RKO210318	N	9:30A	23.6	33.4	7.15	101.3	8.14	16.1	16.6	16.0	0	0	0
Kahana Village RKV210318	N ^{MB}	9:45	24.3	33.7	7.57	108.8	8.24	15.3	16.6 ^{MB}	16.4	0	0	0

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

Romy conditions
RFS - pouring
RKO - Rainbow!

~~RKV~~ RKV - 4th turb. 16.6 - noted above
RKU - oxygen 108.2% 2nd reading

could not get post-sampling turbidity < .10^{MB}

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.09	5.75	59.4	605
Pre-sampling	.10	5.77	58.7	606
Post-sampling	.10 ^{MB}	5.74	58.8	607

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

M. Beeson

Printed Name:

Meredith Beeson

Team	R2R N	Samplers (Last Name, 1st Initial)	Hutchings, L. Berg, L.
Session	85		
Date	03/18/2021		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
RHL210318-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON210318-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS210318-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO210318-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV210318-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

		<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): MB	Printed Name: Meredith Beeson
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