

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

Hui O Ka Wai Ola

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
100	M. Beeson, N. Sampson	2/7/22	9:30	N. Sampson	2/10/22	10:20

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value	POST: Verification Value	Acceptable Range	Comments/ Notes	QA?
Temperature	NIST	n/a	NIST Exp. Date	Std Val	NIST 23.2 °C	NIST 23.3 °C	NIST 23.1 °C	NIST — °C	± 0.6 °C of NIST Compare to NIST Std value in tap water
	4	3	8/17/23		23.2		23.2		
	4	4	8/17/23		23.3		—		
Salinity			3 months	Std Val	Tap water Salin Std 02/26 date 35.0 ppt	Tap water Salin Std 02/26 date 35.0 ppt		± 1 ppt Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	1	3	11/29/21		0.40	35.2	0.40	34.9	
	1	4	11/29/21		0.40	35.3	—	—	
Dissolved Oxygen			1 year	Std Val	100%	100%		± 5%	
	1	1	2/7/22		99.7	101.1			took a while to calibrate, but finally stabilized after a few mins
	1	4	8/12/21		101.7	—			
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	7	2/7/22		7.02	10.01	7.03	10.02	
	1	6	2/7/22		7.01	10.00	—	—	
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
	1	n/a	2/07/22		0.07	5.60	0.07	5.62	* low: 5.78 5.62 recalibrated both meters since the last cal's read 8168 NTU
	NBBF	n/a	2/07/22		0.07	5.79	0.06	5.72	* low: 5.78 for the 800 NTU (got closer values this time)

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

LAB: KAL

post-vert.
Meter kept
reading really
low-gave it
time &
finally
reached
accept.
range.

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	R2RS	Samplers (Last Name, 1st Initial)	M Floyd						Meters and Probes ID			
Session	100		B McLaughlin						HQ40d: 1		2100Q: 1	
Date	02/08/2022		T Freiberg						pH: 7	DO: 1	Salinity: 3	
S. Biesen												

Location Name Sample ID	Freshwater 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 RNS220208	N	7:40	23.4	34.9	6.83	97.8	8.08	1.12	1.16	1.15	Ø	2	Ø
Pohaku RPO220208	N	8:15	23.9	34.8	6.57	94.7	8.14	2.61	2.92	2.91	Ø	5	N/A
Kaanapali Sh RKS220208	N	8:40	23.1	35.2	6.95	99.1	8.12	1.71	1.91	1.88	2	9	N/A
Kahekili Beach Two RKT220208	N	9:01	24.0	35.5	6.75	97.8	8.16	9.5	1.02	1.21	1	Ø	N/A
Canoe Beach RCB220208	N	10:30	25.5	34.9	6.71	99.8	8.17	4.00	4.03	4.15	Ø	9	N/A
Wahikuli RWA220208	NA	10:50	25.3	34.1	6.86	101.1	8.19	1.45	1.45	1.58	Ø	Ø	Ø

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

* Swapped batteries on Hach 2100Q.
* Used spare pre-sample Blank
Hach having issues. See photo. Resetting and GIBRISH
RKT moved south 60 ft due to rocks
RCB - Time delay b/c of 100th sampling event.
- # is different than the ceremonial sample

Post sampling - Turbidity reading low
** Read 5.46 NTU after a few tries w/ low values.
TOOK a few tries to get the medium in range as well
Sites with potential for freshwater flow: Kaanapali Shores, Canoe Beach

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	5.62	56.6	585
Pre-sampling	0.10	5.60	56.6	586
Post-sampling	0.08	5.37 ^{5.46} NB	55.1	579

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

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	R2RS	Samplers (Last Name, 1st Initial)	M. Floyd B. McLaughlin T. Freiberg S. Bieden				
Session	100						
Date	02/08/22						

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS220208-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO220208-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS220208-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT220208-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:01	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB220208-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA220208-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:50	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:

Meredith Beeson

Team	Polanui	Samplers (Last Name, 1st Initial)	Kristy, Gund, K Gonzalez, T Harris, K					Meters and Probes ID		
Session	100					HQ40d: 1			2100Q: NB BF *	
Date	02/09/2022		pH:	7	DO:	1	Salinity:	3		

Location Name Sample ID	Freshwater 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 PFF220209	YES	8:17	24.0	35.3	5.99	86.8	8.07	2.97 2.32	3.13	2.76	0	0	0
Lindsey Hale PLH220209	N	8:44	24.1	35.2	5.86	85.1	8.09	6.00 7.14	6.55	5.39	0	0	0
Lahaina Town PLT220209	N	9:07	24.4	35.3	5.91	86.4	8.07	3.89	3.92	3.77	1	1	0
Camp Olowalu OCO220209													
Papalaua Pali OPP220209													

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

*Using NBBF, since #1 is having problems.

We were thinking that turbidity was inconsistent enough to do a 4+ PLH

Very unusual turbidity!

PLT A diver walked across our site so we waited 5+ minutes before taking samples

Had to stop sampling after PLT — accident on the Pali + traffic backed up to Laniupoko.

* PFF-Kit is still off from yesterday (?)

Sites with potential for freshwater flow: 505 Front St.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)	M87 MB
Standard	0.00	5.78	57.2	585	
Pre-sampling	0.08	5.76	57.5	569	
Post-sampling	0.07	5.74	58.1	568	

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	3	KAL	M. Beeson
Bacteria	-	-	-

Signature (Team Lead):

M. Beeson

Printed Name:

Meredith Beeson

Team	Polanui	Samplers (Last Name, 1st Initial)	Gund, K.
Session	100		Gonzalez, T.
Date	02/09/2022		Harris, K.

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF220209-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:17	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH220209-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT220209-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:07	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO220209-N-1	Camp Olowalu	<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP220209-N-1	Papalaua Pali	<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	Pali backed up - couldn't access

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):

M. Besson

Printed Name:

Meredith Besson

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L. Heinemann, C.						Meters and Probes ID			
Session	100								HQ40d:	1	2100Q: NBBF	
Date	02/10/22								pH:	7	DO:	1

Location Name Sample ID	Freshwater 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 RHL220210	N	7:50A	22.2	34.6	6.53	91.5	8.13	1.31	1.57	1.12	1.22
Oneoia Bay RON220210	N	8:30A	23.7	35.5	7.01	101.4	8.17	0.55	0.60	0.58	1
Kapalua Bay RFS220210	N	8:55A	24.2	34.9	6.51	94.7	8.12	1.36	1.05	1.17	1
Ka'opala Bay RKO220210	N	9:25A	23.7	34.6	6.60	94.9	8.11	4.84	5.18	5.00	0
Kahana Village RKV220210	N	9:41	24.1	34.5	6.77	97.9	8.09	2.89	2.49	2.63	1

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

RHL - 1st reading, 1.31

Very calm conditions, clear, no debns,
no surf

RON - 2ft waves, breaking on shore, turtle
resting on the beach

RFS - calm water, lots of people

RKO - calm, slightly murky, not so much debns

Floating like usual, 4th turbidity 4.88

pH reading was actually from DO probe - 2nd reading
Correct

Sites with potential for freshwater flow: Honolua Bay, Kahana Village

→ RKV - calm, small waves, family at south end
of beach, walked passed by at end of
sampling

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	5.78	57.2	567
Pre-sampling	0.07	5.77	58.2	571
Post-sampling	0.06	5.77	58.1	569

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	KAL	N. Sampson
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

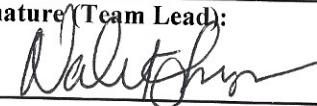
Nalei Sampson

A resident stopped us (VIC Yannco) to say he notices really bad run off at Alaeloa especially after manka events and rain. He said specifically when Napili Market repaved the parking lot and then it rained, and all that debris came down the storm drain into Alaeloa. Interested to see if that would be somewhere to sample.

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L. Hehemann, C.			
Session	100					
Date	02/10/22					

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL220210-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON220210-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS220210-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO220210-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV220210-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:41	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: Nalei Sampson