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:
96	M. Belson	11/1/21	9:35	M. Belson	11/4/21	11:00

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 25.7 °C	NIST 25.5 °C	NIST 25.5 °C	NIST ___ °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	4	3	8/17/23		25.5		25.2				
	4	4	8/17/23			25.4		—			
Salinity			3 months	Std Val	Tap water	Salin Std 6/27/21 date 33.5 ppt	Tap water	Salin Std 6/27/21 date 33.5 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	1	3	10/8/21		0.41	34.9	0.43	34.8		Is Cathy's standard really 33.5?	
	1	4	10/8/21		0.42	35.2	—	—		Is SM having the same readings?	
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	4	8/12/21		101.0%		99.9%				
	1	1	9/28/20		98.7%		—			Need to find battery piece to replace.	
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	6	11/1/21		7.04	9.99	7.04	10.07		got 10.07 3 times used new blue bottle (10.01) solution	
	1	5	11/1/21		7.04	9.97	—	—			
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	10/8/21		0.06	5.38	0.06	5.47		☆ LOW: 5.41 NTU	
	NBBF	n/a	10/8/21		0.06	5.55	—	—		☆ LOW: 5.56 NTU	

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

lab: KAL

Team	R2RS
Session	96
Date	11/2/2021

Samplers (Last Name, 1st Initial): Beeson, M.; Sampson, N.

Changed salinity values to correct for error in salinity probe calibration. 1.5 ppt was subtracted from each measured value. QA

Meters and Probes ID

HQ40d: 1 | 2100Q: 1 | pH: 6 | DO: 4 | Salinity: 3

Location Name Sample ID	Freshwater Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%) 85-105 normal	pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft) water	beach	camp
Napili Bay RNS211102	N	8:10	26.2	36.8 35.3	6.65	101.5	8.22	1.33	1.54	1.40	1	3	∅
Pohaku RPO211102	N	8:44	26.0	34.8 33.3	6.72	101.1	8.20	7.44	7.64	7.99	1	6	∅
Kaanapali Sh RKS211102	N	9:08	26.8	37.0 35.5	6.64	102.3	8.21	3.25	3.98	3.22	2	9	∅
Kahekili Beach Two RKT211102	N	9:34	26.5	36.8 35.3	6.65	102.1	8.20	7.92	7.81	7.15	∅	3	∅
Canoe Beach RCB211102	N	10:00	26.5	36.2 34.7	6.68	101.9	8.21	2.67	2.69	3.19	∅	4	∅
Wahikuli RWA211102	N	10:22	26.7	35.8 34.3	6.51	100.4	8.19	2.67	2.72	2.60	∅	5	∅

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

RNS - large shore break, 8.22 X3 for pH

RPO - dog on beach, lots of surfers, big swell; sand has filled in the beach - higher level than last sampling session, 8.20 X3 for pH

RKS - medium wave action, freshwater blocked by sand dune, but relatively clear, can see fish inside, second salinity reading 36.9, 8.20 X2 for pH

RKT - continuing to sample off to the right due to rock exposure; pH: 8.20 x3 times

RCB - calmer conditions, pH 8.21 X2

Sites with potential for freshwater flow: Kaanapali Shores, Canoe Beach

RWA - Calm, pH #2 8.20 X2

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.00	5.41	56.1	625
Pre-sampling	0.07	5.38	55.9	625
Post-sampling	0.07	5.46	56.1	623

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead): MBeeson **Printed Name:** Meredith Beeson

Team	R2RS
Session	96
Date	11/2/2021

Samplers (Last Name, 1st Initial): Beeson, M. ; Sampson, N.

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS211102-N-1	Napili Bay	☑	☐	8:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO211102-N-1	Pohaku	☑	☐	8:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS211102-N-1	Kaanapali Sh	☑	☐	9:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT211102-N-1	Kahekili Beach Two	☑	☐	9:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB211102-N-1	Canoe Beach	☑	☐	10:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA211102-N-1	Wahikuli	☑	☐	10:22	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
		☐	☐		500 ml		
		☐	☐		500 ml		
		☐	☐		500 ml		
		☐	☐		500 ml		

Signature (Team Lead): MBeeson **Printed Name:** Meredith Beeson

Team	Polanui
Session	96
Date	11/3/2021

Samplers (Last Name, 1st Initial): Mayen, I; Harris, K

Changed salinity values to correct for error in salinity probe calibration. 1.5 ppt was subtracted from each measured value. QA

Meters and Probes ID

HQ40d:	1	2100Q:	1
pH:	6	DO:	4
Salinity:	3		

Location Name Sample ID	Freshwater Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%) 85-105 normal	pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft) water	People (within 100 ft) beach	People (within 100 ft) camp
505 Front St PFF211103	Y	8:15	26.2	~~35.9~~ 34.4 ~~758~~	~~6.18~~ ~~7.58~~	93.4	8.07	~~.85~~ ~~1.21~~	.84	.82	0	0	0
Lindsey Hale PLH211103	N	8:42	26.4	35.0 36.5	6.02	91.7	8.12	3.56	3.10	2.90	0	0	0
Lahaina Town PLT211103	N	9:01	~~26.5~~	35.1 36.6	6.17	94.1	8.13	2.23	2.51	2.84	0	1	0
Camp Olowalu OCO211103	N	9:36	28.8	35.3 ~~36.8~~	6.23	97.2	8.10	.98	.96	.98	2	2	0
Papalaua Pali OPP211103	N	9:54	27.6	35.4 ~~36.9~~	6.59	102.5	8.16	2.96	3.15	3.06	0	0	0

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

PPF- Kit put PH probe in by mistake on 1st read ☹
Took 4th read on turbidity

PLT 2 monk seals south 1st reef

No tape ~~of~~ on KCL
KCL tipped so we added some (too much?)

Sites with potential for freshwater flow: 505 Front St.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	5.41	56.1	625
Pre-sampling	0.09	5.39	55.7	626
Post-sampling	0.06	5.41	56.0	628

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead): Nalei Sampson **Printed Name:** Nalei Sampson

Team	Polanui
Session	96
Date	11/3/2021

Samplers (Last Name, 1st Initial): Mayen, Y.; Hams, K.

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF211103-N-1	505 Front St	☑	☐	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH211103-N-1	Lindsey Hale	☑	☐	8:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT211103-N-1	Lahaina Town	☑	☐	9:01	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO211103-N-1	Camp Olowalu	☑	☐	9:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP211103-N-1	Papalaua Pali	☑	☐	9:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
		☐	☐		500 ml		
		☐	☐		500 ml		
		☐	☐		500 ml		
		☐	☐		500 ml		

Signature (Team Lead): Nalei Kam

Printed Name: Nalei Sampson

Team	R2RN
Session	96
Date	11/4/2021

Samplers (Last Name, 1st Initial): Hutchings, L; Hehemann, C; Beeson, M. (observing); Floyd, M.; Bieser, S.

Meters and Probes ID		
HQ40d: \	2100Q: \	
pH: 6	DO: 4	Salinity: 3

Location Name Sample ID	Freshwater Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%) 85-105 normal	pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft) water	beach	camp
Honolua Bay RHL211104	N	8:00A	24.9	36.2 34.7	6.59	98.0	8.16	17.2	15.8	16.9	0	7	0
Oneloa Bay RON211104	—	8:40A	26.1	36.9 35.4	6.69	102.1	8.20	1.23	1.63	1.29	0	0	0
Kapalua Bay RFS211104	N	9:05A	26.3	36.5 35.0	6.71	102.7	8.17	3.43	3.26	4.01	4	9	0
Ka'opala Bay RKO211104	N	9:35A	25.7	36.3 34.8	6.70	101.3	8.14	17.4	17.0	16.8	0	0	0
Kahana Village RKV211104	N	9:55A	26.3	36.8 35.3	7.16	109.5	8.26	4.01	3.97	4.25	1	4	1

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

RHL - Rain sprinkles & high surf on outer break - salinity 2nd reading 36.2. PH 2nd reading 8.16

RON - Salinity tested twice at 36.9

RFS - Salinity 2nd reading 36.5

RKO - 2nd ~~test~~ salinity 36.2 ppt

RKV - 2nd reading DO % 109.4 - water in stream, but not flowing to ocean

Changed salinity values to correct for error in salinity probe calibration. 1.5 ppt was subtracted from each measured value. QA

Rained last night in Kahana; drizzled throughout the morning

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

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	5.41	56.1	625
Pre-sampling	0.06	5.43	55.7	627
Post-sampling	0.06	5.47	56.0	624

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead): MBeeson **Printed Name:** Meredith Beeson

Team	R2RN
Session	96
Date	11/4/2021

Samplers (Last Name, 1st Initial): Hutchings, L.; Hehemann, C.; Beeson, M.

observing: Floyd, M.; Bieser, J.

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL211104-N-1	Honolua Bay	☑	☐	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON211104-N-1	Oneloa Bay	☑	☐	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS211104-N-1	Kapalua Bay	☑	☐	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO211104-N-1	Ka'opala Bay	☑	☐	9:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV211104-N-1	Kahana Village	☑	☐	9:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
		☐	☐		500 ml		
		☐	☐		500 ml		
		☐	☐		500 ml		
		☐	☐		500 ml		

Signature (Team Lead): MB

Printed Name: Meredith Beeson