

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:
122	L. Yannell, J. Erwin	5/22/23	12:00	L. Yannell, J. Erwin	5/25/23	11:30

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 31.5 °C	NIST 26.8 °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	4	-	8/17/23		31.9	26.7			
	-	-	-		—	—			
Salinity			3 months	Std Val	Tap water 4/10/23 date 34.4 ppt	Tap water 5/22/23 date 33.4 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle New probe	
	4	5	5/22/23		0.07	33.4	0.11	33.7	
	-	-	-		—	—	—	—	
Dissolved Oxygen			1 year	Std Val	100%	100%	± 5 %		
	4	4	8/15/22		101.0	99.7			
	3	1	2/6/23		100.7	—			
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
	4	8	5/22/23		7.00	9.97	7.01	9.96	NEW probe failed 1st calibration slope out of range pH 7
	3	7	5/22/23		7.00	9.97	—	—	PASSED calibration second time
Turbidity			3 months	Std Val	BLANK <0.1 NTU	LOW 1-10 <0.1 NTU	BLANK <0.1 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value Standard Low = 6.06 Low - Standard 5:34
	4	n/a	4/10/23		0.05	6.12	0.05	6.09	
	1	n/a	5/11/23		0.07	5.28	—	—	

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

OLP

Team	R2RS	Samplers (Last Name, 1st Initial)	Floyd, M						Meters and Probes ID		
Session	121 122		Bleser, S						HQ2200: 4	2100Q: 4	
Date	05/23/2023		pH: 8	DO: 4	Salinity: 5						

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) 5.2-7.0 normal	(%) 85-105 normal			water	beach	camp
Napili Bay RNS230523	N	8:08	25.2	34.3	6.83	100.3	8.09	0.76	0.92	0.74	0
Pohaku RPO230523	N	8:29	25.2	33.4	6.66	97.5	8.17	2.13	1.58	2.10	0 0 0
Kaanapali Shores RKS230523	N	8:54	25.4	34.9	6.76	100.1	8.11	1.46	1.23	1.07	5 12 0
Kahekili Beach Two RKT230523	N	9:27	25.9	35.1	6.66	99.4	8.13	1.59	1.95	1.72	3 7 0
Canoe Beach RCB230523	N	9:54	27.0	34.4	6.71	101.4	8.17	3.15	3.23	3.17	1 5 0
Wahikuli RWA230523	N	10:15	26.3	33.1	6.72	99.8	8.17	2.37	1.54	2.20	0 5 0

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

RNS: 0-1 ft shorebreak

RPO: calm waters, 4th turb: 1.58 8B.

- Syringe Malfunction - Used spare + spare nutrient bottle

RKS: CALM swells - 4th turbidity 1.32

RKT: calm swells.

RCB: small but messy / choppy waves that churned up sand in sampling area.
High temp @ 27.0

RWA: 0-1 ft shorebreak 4th turbidity 2.37
Sites with potential for freshwater flow: Kaanapali Shores, Canoe Beach

Opw A - nutrient sample taken at 10:43am

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	6.06	63.7	625
Pre-sampling	0.07	6.10	63.2	627
Post-sampling	0.06	6.10	63.4	624

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	6	OLP	Jess Envin
Bacteria	-	-	-

Signature (Team Lead):

Jessica Envin

Printed Name:

JESSICA ENVIN

Team	R2RS
Session	122
Date	05/23/2023

Samplers
(Last Name,
1st Initial)

Floyd, M.
Bieser, S.

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS230523-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO230523-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:29	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS230523-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT230523-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:27	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB230523-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA230523-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	Nutrient sample taken at 10:43 am

		<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):

Jessica En

Printed Name:

Jessica Enwin

Team	Polanui	Samplers (Last Name, 1st Initial)	HARRIS, K GUND, K						Meters and Probes ID		
Session	122								HQ2200: 4	2100Q: 4	
Date	05/24/2023								pH: 8	DO: 4	Salinity: 5

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) 5.2-7.0 normal	(%) 85-105 normal				water	beach	camp	
505 Front St PFF230524	Y	8:10	25.5	35.1	5.70	84.5	7.98	2.11	1.75	2.03 K17	1 dog	6	0
Lindsey Hale PLH230524	N	8:38	25.7	34.9	5.75	85.4	8.04	1.93	1.64	1.81 2.43	0	2	0
Lahaina Town PLT230524	N	9:06	26.1	35.1	5.77	86.4	8.02	1.52	1.48	1.47 K17	7	0	0
Camp Olowalu OCO230524	N	9:30	26.6	35.3	6.70	101.2	8.10	5.03	4.95	4.77 K17	0	0	0
Mile Marker 14 OMM230524	N	9:50	26.3	35.1	6.45	96.9	8.07	1.49	1.50	1.51 K17	0	2	0
Ukumehame OUB230524	N	10:10	26.1	35.6	6.99	105.0	8.17	6.46	6.67	6.75 K17	0	0	0
Papalaua Pali OPP230524	N	10:26	25.5	35.4	7.08	105.0	8.19	2.02	1.71	1.99 K17	0	0	0

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

Use the back of the form if needed.

PFF stream pic. taken

PLH calm

PLT ~1 tsp of nutrient water missed →
very hard plunge

OMM calm, beautiful

* No KCL seal
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	6.06	63.7	625
Pre-sampling	0.06	6.09	63.3	625
Post-sampling	0.06	6.10	63.5	624

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	7	OLP	Liz Yannell

Signature (Team Lead):

Liz Yannell

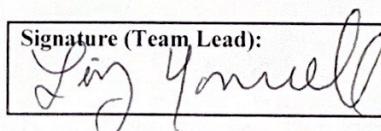
Printed Name:

Liz Yannell

Team	Polanui	Samplers (Last Name, 1st Initial)	Harris, K. Gund, K.			
Session	122					
Date	05/24/2023					

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF230524-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH230524-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	
PLT230524-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:06	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO230524-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OMM230524-N-1	Mile Marker 14	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
oub2305234-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP230524-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:26	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):  Printed Name: **Liz Yannell**

Team	R2RN	Samplers (Last Name, 1st Initial)	<i>Hutchings, L</i>					Meters and Probes ID		
Session	122		<i>Hunley, C</i>					HQ2200: 4		
Date	05/25/23		<i>Hekemeha, C</i>					pH: 8	DO: 4	Salinity: 5

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) 5.2-7.0 normal	(%) 85-105 normal		2.55	3.02	2.82	water	beach	camp	
Honolua Bay RHL230525	N	8:00 A	24.2	34.0	6.23	89.4	8.09	G4	2.55	3.02	2.82	5	0	0
Oneoia Bay RON230525	N	8:15 A	25.3	35.3	6.88	101.9	8.15	0.25	0.31	0.40	0.334	0	0	0
Kapalua Bay RFS230525	N	9:15 A	25.9	34.8	6.41	95.3	8.08	0.67	1.70	0.69	0.671	10	24	7
Ka'opala Bay RKO230525	N	9:45 AM	25.8	34.5	6.61	98.0	8.16	4.42	5.32	4.74	0.671	0	0	0
Kahana Village RKV230525	N	10:20	26.4	35.0	6.73	101.0	8.13	2.83	3.43	1.84	1.84	0	0	0

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

RHL - Light rain, calm ocean, no wind ^{A few} turbidity
RON - sunny, breezy, surf, low tide
2nd Salinity 35.3 same. - low turbidity.

RFS: sunny, breezy, calm water Turbidity
my first reading out of range after
reading 1.70, then back to normal

RKO - Calm, No Wind or Waves, water slightly murky

RKV - Calm, clear, little wind - Construction ongoing
^{bridge}

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	6.06	63.7	625
Pre-sampling	0.05	6.09	63.0	626
Post-sampling	0.05	6.09	63.3	625

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	6	OLP	Liz Yannell
Bacteria	-	-	-

Signature (Team Lead):

Liz Yannell

Printed Name:

Liz Yannell

RKV - 4m turbidity 2.43

Last update: 06/01/2023

Team	R2RN
Session	122
Date	05/25/23

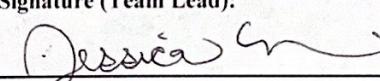
Samplers
(Last Name,
1st Initial)

Hutchings, L.
Hurley, C.
Hehemann, C.

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL230525-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	
RON230525-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	
RFS230525-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO230525-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV230525-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:20	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):

 Jessica Erwin

Printed Name: