

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

Session No:	Verifiers (pre-sampling):				Pre Date:	Pre Time:	Verifiers (post-sampling):				Post Date:	Post Time:
114	L. Yannell, J. Erwin, E. Johnson, T. Callender				11/28/22	2:35	L. Yannell, E. Johnson				12/1/22	2:09
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	NIST	NIST	NIST	± 0.6 °C of NIST	Compare to NIST Std value in tap water		
	4	4	8/17/23		27.4		26.8					
	4	3	8/17/23			27.1		—				
Salinity			3 months	Std Val	Tap water	Salin Std 5/24/22 date 33.9ppt	Tap water	Salin Std 5/24/22 date 33.9ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle salinity standard Exp 11/2026		
	4	4	11/28/22		0.20	33.8	0.23	33.9				
	3	3	11/28/22		0.21	34.1	—	—				
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %			
	4	4	2/7/22		99.8 %		101.9 %					
	3	1	8/15/22		98.6 %		—					
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	6	11/28/22		6.99	9.95	6.96	9.96		Temp variation over time of verification. Checked twice		
	3	7	11/28/22		7.03	9.97	—	—		pH 7 + 10 Exp March 2023 pH 4 Exp March 2025		
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.43 NTU	BLANK <0.1	LOW 1-10 6.43 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value		
	4	n/a	11/4/22		0.08	6.40	0.08	6.41		Low standard! 6.43		
	1	n/a	10/17/22		0.06	5.65	—	—		5.72		

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

OLP lab



Team	R2RS	Samplers (Last Name, 1st Initial) FLOYD, M KLANBERG, J BIESER, S	Meters and Probes ID		
Session	114		HQ2200: 4	2100Q: 4 20	
Date	11/29/2022		pH: 4 6	DO: 4 2	Salinity: 4

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 RNS221129	N	8:10	25.3	35.7	6.73	99.7	8.14	2.10 2.52	1.99	2.08	0	3	0
Pohaku RPO221129	N	8:34	25.3	35.1	6.64	98.2	8.12	20.4 16.58	18.9	19.8	0	5	0
Kaanapali Shores RKS221129	Y	8:55	25.8	35.7	6.77	101.3	8.17	2.86	3.76	2.94	5	4	0
Kahekili Beach Two RKT221129	N	9:16	26.0	35.7	6.58	98.8	8.18	2.62	3.80 2.97	2.91	2	8	0
Canoe Beach RCB221129	N	9:43	26.3	35.7	6.59	99.4	8.19	2.50	3.14	3.11	4	4	0
Wahikuli RWA221129	N	9:57	26.4	35.8	6.66	100.7	8.20	8.35	8.88	7.93	0	0	0

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

RNS: intermittent 1-2' swell, no wind, overcast, ↑ tide  
- 4th turbidity reading

RPO: small swells ↑ tide, nearby HONU

RKS: Aquaduck completely full and flowing  
into ocean. Small but active swells.

RKT: High tide, 1/2' shore break, slight onshore wind  
- 4th turbidity reading

RCB: small swells

RWA: small swells. HONU nearby

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	0.08	6.43	64.9	597
Pre-sampling	0.09	6.40	64.5	601
Post-sampling	0.09	6.42	64.8	598

#### CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Liz Yannell

Printed Name:

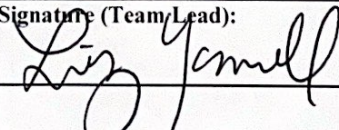
Liz Yannell



Team	R2RS	Samplers (Last Name, 1st Initial)	Floyd, M. Kranberg, J. Bieser, S.
Session	114		
Date	11/29/22		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS221129-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO21129-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS21129-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT21129-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB21129-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA21129-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:57	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:
	Liz Yannell



Team	Polanui	Samplers (Last Name, 1st Initial)	GONZALEZ, T HARRIS, K GUND, K	Meters and Probes ID		
Session	114			HQ2200: 4	2100Q: 14	8y
Date	11/30/2022			pH: 6	DO: 2	Salinity: 4

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 PFF221130	Y	8:09	25.8	35.7	6.35	95.3	8.13	1.25	1.50	1.44	0	0	0
Lindsey Hale PLH221130	N	8:33	25.8	35.5	6.48	97.0	8.16	16.1	16.0	15.5	0	3	0
Lahaina Town PLT221130	N	8:49	25.8	34.9	6.46	96.5	8.13	19.3	19.1	18.2	0	0	0
Camp Olowalu OCO221130	N	9:18	26.1	35.6	6.13	92.1	8.04	10.4	12.0	12.1	0	0	1
Papalaua Pali OPP221130	N	9:38	26.6	35.8	6.67	101.4	8.11	6.46	7.24	6.88	0	0	1

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

PRE-SAMPLE OF BLANK TOOK TWO READS  
PLH HAS LOTS OF DEBRIS WASHED UP (CORAL LOGS)  
SAMPLES TAKEN IN NEAR SHORE BREAK  
PLT VISIBLY "SILT-Y"  
OCO - RESIDENT CAMPERS - THREE VEHICLES. IN THE TREE ON BEACH.  
4TH TURBIDITY WAS 11.2  
OPP - HIGH TIDE. "CAMPER" IS SHADE TENT

Sites with potential for freshwater flow: 505 Front St.

#### TURBIDITY VERIFICATION

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Standard	0.09	6.43	64.9	597
Pre-sampling	0.09	6.42	64.6	599
Post-sampling	0.08	6.41	64.9	599

#### CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	OLP	Liz Yarnell
Bacteria	-	-	-

Signature (Team Lead):

Liz Yarnell

Printed Name:

Liz Yarnell



Team	Polanui	Samplers (Last Name, 1st Initial)	Gonzalez, T. Harris, K. Gund, K.
Session	114		
Date	11/30/2022		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
PFF221130-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:09	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH221130-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:33	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT221130-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:49	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO221130-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP221130-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:38	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): <i>Liz Yannell</i>	Printed Name: Liz Yannell
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Sample Collection Datasheet

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L Berg, L Hutchmann, C	Meters and Probes ID				
Session	114			HQ2200: 4	2100Q: 74	pH: 6	DO: 2	Salinity: 4
Date	12/01/22							

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 RHL2211201	N	7:55	24.7	35.1	6.43	94.6	8.13	3.79	3.49	3.48	2	0	0
Oneloa Bay RON221201	N	8:30	25.5	35.9	6.83	102.1	8.20	0.64	0.58	0.57	0	9	0
Kapalua Bay RFS221201	N	8:55	25.4	35.6	6.40	95.2	8.14	1.83	1.39	1.76	4	15	0
Ka'opala Bay RKO221201	N	9:20	25.7	35.4	6.10	91.2	8.10	5.04	5.54	5.13	0	0	0
Kahana Village RKV221201	N	9:40	25.6	35.4	6.64	98.8	8.09	5.95	6.54	5.97	0	1	0

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

RHL- Calm conditions, 2nd salinity 35.1  
RON- 35.8 2nd salinity.  
RFS- 35.5 2nd salinity  
1.43 dtm NTU  
RKO- 35.4 2nd salinity  
RKV- 35.4 " "

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	0.08	6.43	64.9	597
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CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	OLP	Liz Yannell
Bacteria	-	-	-

Signature (Team Lead):

Liz Yannell

Printed Name:

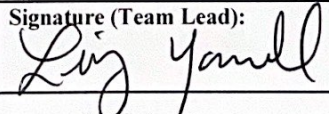
Liz Yannell



Team	R2RN	Samplers (Last Name, 1st Initial)  Hutchings, L. Berg, L. Heheman, C.
Session	114	
Date	12/01/22	

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
RHL221201-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON221201-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	
RFS221201-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	
RKO221201-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV221201-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): 	Printed Name: Liz Yannell
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