

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
116	L. Yannell + J. Erwin	1/16/23	11:28	L. Yannell	1/19/23	11:45

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	27.6	27.7	31.2	31.2	—		NIST Exp 8/17/23	
	4	3	8/17/23	27.5	27.5	—	—	—			
Salinity			3 months	Std Val	Tap water	Salin Std	Tap water	Salin Std	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	4	4	11/28/22	0.17	33.5	0.28	33.5	—		confirmed salinity of post tap water	
	3	3	11/28/22	0.18	34.0	—	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	4	4	8/15/22	101.1%	101.1%		101.3%			sensor expires in 22 days	
	3	1	2/7/22	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	
	4	6	1/16/23	7.00	6.99	9.95	7.02	9.98		pH 7.00 pH 10.01 > Exp March 2023	
	3	7	1/16/23	7.02	7.02	9.98	—	—			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10	BLANK <0.1	LOW 1-10	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	4	n/a	11/4/22		0.07	6.44	0.07	6.43		Low 6.43 NTU	
	1	n/a	1/16/23		0.06	5.63	—	—		Low 5.65 NTU	

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

OLP - Lab

Team	R2RS	Samplers (Last Name, 1st Initial)	Erwin, J. Bieser, S. Bieser, M.	Meters and Probes ID		
Session	116			HQ2200: 4		2100Q: 4
Date	1/17/2023			pH: 6	DO: 4	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 RNS230117	N	8:10	24.5	35.4	6.92	100.8	8.18	1.07	0.96	0.94	0	4	0
Pohaku RPO230117	N	8:45	24.8	33.9	6.87	99.7	8.18	4.38	4.19	4.47	3	2	0
Kaanapali Shores RKS230117	N	9:10	25.1	35.8	6.76	99.7	8.17	2.29	2.37	2.27	2	8	0
Kahekili Beach Two RKT230117	N	9:45	25.3	35.7	6.77	100.1	8.19	4.88	5.09	4.92	5	4	0
Canoe Beach RCB230117	N	10:10	25.6	35.3	6.65	98.8	8.18	3.39	3.45	3.50	0	8	0
Wahikuli RWA230117	N	10:30	25.6	34.3	6.87	101.4	8.22	1.73	1.93	1.78	0	0	0

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

2 ft Swell, Smell of sewage possibly? - RNS Napili Bay
RPO - 1 ft Swell
RKS - NO freshwater flow, 1 ft Swell, took 4th turbidity sample testing in sun. on
RKT - 2-3 ft shore break
RCB - calm conditions, 4th reading on turbidity
RWA - 1 ft shore break, murky close to shore due to resuspension of sediment/sand
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	6.43	64.9	597
Pre-sampling	0.08	6.35	64.7	600
Post-sampling	0.06	6.43	65.0	598

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	OLP	Jess Erwin
Bacteria	-	-	-

Signature (Team Lead):

Jessica Erwin

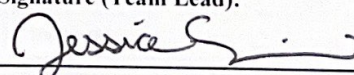
Printed Name:

Jessica Erwin

Team	R2RS	Samplers (Last Name, 1st Initial)	Erwin, J. Bieser, S. Bieser, M.
Session	116		
Date	1/17/23		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS230117-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	
RPO230117-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS230117-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT230117-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB230117-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA230117-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:30	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:
	Jessica Erwin

Team	Polanui	Samplers (Last Name, 1st Initial)	GUND, K GONZALEZ, T HARRIS, K	Meters and Probes ID		
Session	116			HQ2200: 4	2100Q: 4	
Date	1/18/2023			pH: 6	DO: 4	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 PFF230118	Y	8:12	24.8	35.5	6.13	89.9	8.07	0.67 KLT	1.55 KLT	0.80	0	0	0
Lindsey Hale PLH230118	N	8:36	24.5	35.4	5.75	83.8	8.08	4.70	4.80	5.10	0	2	0
Lahaina Town PLT230118	N	8:55	24.5	35.5	5.87	85.7	8.09	2.42	2.58	2.37	0	1	0
Camp Olowalu OCO230118	N	9:25	25.9	35.7	6.35	94.9	8.07	1.29	1.60	1.23	0	4	1 car
Papalaua Pali OPP230118	N	9:45	25.8	35.9	6.96	104.3	8.13	8.74	8.88	8.83	0	0	0

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

PFF extra turbidity due to outlier of 1.55
DCO did extra turbidity but didn't cross out
because it was 1.62

Overall, very peaceful calm water
except medium/small waves at OPP

Sites with potential for freshwater flow: 505 Front St.

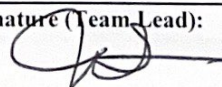
TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.06	6.43	6.49	597
Pre-sampling	0.07	6.42	6.45 KLT	600
Post-sampling	0.08	6.41	6.47	598

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	Sharpe
Bacteria	-	-	-

Signature (Team Lead):



Printed Name:

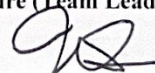
Sharpe

Team	Polanui	Samplers (Last Name, 1st Initial)	GUND, K GONDZALEZ, T HARRIS, K
Session	116		
Date	1/18/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF230118-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH230118-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT230118-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	
OCO230118-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP230118-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	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:

Sharpe

Team	R2RN	Samplers (Last Name, 1st Initial)	Berg, L., Harlow, C., Hehemann, C.		Meters and Probes ID		
Session	116				HQ2200: 4	2100Q: 4	
Date	01/19/23				pH: 6	DO: 4	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
Honolua Bay RHL230119	N	7:57	23.1	35.3	6.72	95.9	8.17	13.4	13.2	13.2	0	0	0
Oneloa Bay RON230119	N	8:49	25.0	36.0	6.93	102.6	8.21	.61	.69	.72	2	9	0
Kapalua Bay RFS230119	N	9:25	24.9	35.3	6.82	103.0	8.17	1.57	1.68	1.43	6	25	0
Ka'opala Bay RKO230119	N	9:43	25.0	35.3	6.68	98.4	8.12	9.53	7.74	8.11	0	3	0
Kahana Village RKV230119	N	10:15	24.9	35.7	6.87	101.2	8.15	3.01	3.20	3.69	1	4	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).
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RKO - 4th Turbidity 9.95
RKV - Work still on going on nearby Bridge

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	0.08	6.42	64.1	600
Post-sampling	0.07	6.43	64.7	600

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Liz Yannell

Printed Name:

Liz Yannell

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

Team	R2RN	Samplers (Last Name, 1st Initial)	Berg, L. Harley, C. Heherman, L.
Session	116		
Date	01/19/23		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL230119-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:57	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON230119-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:49	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS230119-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO230119-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV230119-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:15	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	Liz Yannell