

Hui O Ka Wal Ola

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

Session No:	Verifiers (pre-sampling):		Pre Date:	Pre Time:	Verifiers (post-sampling):		Post Date:	Post Time:
WM 126	L. Yannell		8/14/2023	10:04 PM	L. Yannell		8/19/23	9:39 AM

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 25.8 °C	NIST 28.8 °C	NIST 28.8 °C	NIST — °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water		
	2	7	6/28/2024		25.7		28.7					
	—	—	—		28.7		—					
Salinity			3 months	Std Val	Tap water	Salin Std 8/17/23 date 33.7 ppt	Tap water	Salin Std 8/17/23 date 33.7 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle		
	3	7	8/17/23		0.04	34.3	0.04	34.2		Kula tap H2O		
	—	—	—		—	—	—	—				
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %			
	3	3	7/17/23		101.2		101.9					
	—	—	—		—		—					
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		
	3	5	8/14/23		7.00	10.01	6.99	10.02				
	—	—	—		—	—	—	—				
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.54 NTU	BLANK <0.1	LOW 1-10 6.54 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value		
	5	n/a	8/17/23		0.05	6.49	0.06	6.52				
	—	n/a	—		—	—	—	—				

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

LYL - Liz Yannell lab (Kula)

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	R2RS	Samplers (Last Name, 1st Initial)	S. Bieser	L. Yannell				Meters and Probes ID					
Session	126		M. Floyd	T. Friedberg				HQ2200: SM 3		2100Q: SM 5			
Date	08/15/2023				pH: SM 5	DO: SM 3	Salinity: SM 7						
Location Name Sample ID	Fresh water Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen (mg/L) 5.2-7.0 normal	pH 8-8.3 normal	Turbidity (NTU)	People (within 100 ft)					
Napili Bay RNS230815	N	9:50	27.2	34.8	6.80	103.6	8.11	1.98	1.97	1.97	1	2	0
Pohaku RPO230815	N	10:20	26.8	33.8	7.03	106.2	8.22	0.75	0.81	1.07	0	2	0
Kaanapali Shores RKS230815	N	10:42	27.4	35.6	6.71	103.4	8.16	1.51	1.67	1.76	0	0	0
Kahekili Beach Two RKT230815	N	11:08	27.0	35.7	6.70	103.6	8.21	1.08	1.11	1.30	0	0	0
Canoe Beach RCB230815	N	11:30	28.7	35.1	7.20	113.0	8.22	2.24 ²⁴	2.79	2.70	0	5	0
Wahikuli RWA230815	N	11:50	28.0	34.7	6.86	106.0	8.22	0.77	0.76	0.76	0	0	0

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

RNS - Bucket may have been hot - testing in sun
RPO - Red algae washed up on shore, tide coming in low; Aid Station set up at S-Turns parking lot
*Extreme fires in Lahaina 7 days ago.
RKS - sunny, calm water, small shorebreak
RCB - clean looking water for site, small shorebreak, sunny; 4th turbidity = 2.24 Confirmed DO w/ second reading
RWT - calm, clear. Only saw 1 honu (less than normal)

Sites with potential for freshwater flow: Ka'anapali Shores, Canoe Beach

*Samples collected 2 hrs later than normal

TURBIDITY VERIFICATION & PROBE TEMPERATURES

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Turbidity Standard	0.05	6.54	58.4	605
Field - Pre-sample	0.07	6.51	58.9	605
Lab - Post sample	0.06	6.49	58.8	605
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Verify Probe Temps	27.1	27.2	27.3	

CHAIN OF CUSTODY INFORMATION

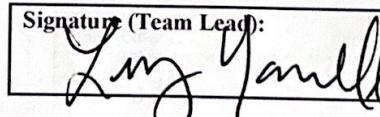
	# of samples	Relinquished to	Contact
Nutrients	6	LPK	Kristy Gund Kristy's House
Signature (Team Lead):	Liz Yannell	Printed Name:	Liz Yannell

Last updated August 2023

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	R2RS	Samplers (Last Name, 1st Initial)	S. Bieser	L. Yannell
Session	126		M. Floyd	
Date	08/15/2023		T. Friedberg	

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS230815-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO230815-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS230815-N-1	Kaanapali Shores	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT230815-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB230815-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA230815-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11:50	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: **Liz Yannell**

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Polanui	Samplers (Last Name, 1st Initial)	HARRIS, K GUND, K GUND, M						Meters and Probes ID		
Session	126								HQ2200: SM 3	2100Q: SM 5	
Date	08/16/2023		pH: SM 5	DO: SM 3	Salinity: SM7						
Location Name Sample ID	Fresh water Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen (mg/L) 5.2-7.0 normal	(%) 85-105 normal	pH 8.8.3 normal	Turbidity (NTU)	People (within 100 ft)		
									water	beach	camp
505 Front St PFF230816											
Lindsey Hale PLH230816											
Lahaina Town PLT230816											
Camp Olowalu OCO230816	N	9:03	27.2	35.9	6.35	97.1	8.08	1.62	1.85	1.66	0 0 0
Mile Marker 14 OMM230816	N	9:24	26.9	35.6	5.94	90.2	8.04	1.57	1.69	1.62	0 0 0
Ukumehame OUB230816	N	9:44	26.7	35.9	6.75	102.5	8.14	6.59	6.35	6.43	0 0 0
Papalaua Pali OPP230816	N	10:14	27.0 ^o sal	35.9	6.94	105.8	8.20	2.33	2.51	2.61	2.24 0 0 0

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

FIRST SAMPLING AFTER LAHAINA WILDFIRE

OCO Many trees down, pics taken, light breeze, calm water, cloudy

OMM looks like always

OUB Some branches down by road, calm surf

* Stopped at Papalaau sunscreen dispenser & replenished + cleaned

OPP Relatively calm surf

A MISSED TEMP READING OF ALL PROBES AT 1ST SITE

Sites with potential for freshwater flow: 505 Front St & Ukumehame

MONTE WAS WATCHING THE DIFFERENCE AND RECALLS

DIFFERENCE BETWEEN SALINITY & DO TEMP WAS ABOUT .1-.2 °

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Turbidity Standard	0.05	6.54	58.4	605
Field - Pre-Sample	0.05	6.51	59.0	605
Lab - Post Sample	0.05	6.48	59.0	605
Probes (+/- 0.2 °C)	D.O.	Salinity	pH	Notes
Verify Probe Temps	27.0	27.2	27.1	
CHAIN OF CUSTODY	# of Samples	Relinquish to	Contact	
Nutrients	4	LPK	KRISTY GUND	

Signature (Team Lead): Kristy Gund Print: KRISTY GUND

Filled in at lab

Kristy's freezer (power) went out around 11am so samples stayed in cooler bag w/ blue ice until ~6:30pm [nutrients]

Last updated April 2023

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Polanui	Samplers (Last Name, 1st Initial)	HARRIS, K GUNSD, K GUND, M				
Session	126						
Date	08/16/2023						

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF230816-N-1	505 Front St	<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH230816-N-1	Lindsey Hale	<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT230816-N-1	Lahaina Town	<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO230816-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:03 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	All samples kept in cooler on ice until ~6:30 pm
OMM230816-N-1	Mile Marker 14	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:24 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	" " "
OUN230816-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:44 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP230816-N-1	Papalaau Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:14 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	STOPPED @ PAPALAU WORKSIDE FOR SENSCREEN DISPENSER MAINTENANCE ~10 MINUTES.

Sediments						500 ml		
						500 ml		
						500 ml		

Signature: *Kristy Gund* Print: KRISTY GUND

Last updated April 2023

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L Hehemann, C Beeson, M						Meters and Probes ID					
Session	126 <th data-kind="ghost"></th> <th data-cs="3" data-kind="parent">HQ2200: SM 3</th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th>2100Q: SM 5</th>								HQ2200: SM 3			2100Q: SM 5		
Date	08/17/2023	pH: SM 5	DO: SM 3	Salinity: SM 7										
Location Name Sample ID		Freshwater Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen (mg/L) 5.2-7.0 normal		pH 8-8.3 normal	Turbidity (NTU)		People (within 100 ft)			
						(%) 85-105 normal					water	beach	camp	
Honolua Bay RHL230817	N	8:00	25.6	34.5	6.22	91.8	8.12	1.79 MB	2.99	1.40	1.86	0	0	0
Onealoa Bay RON230817	N	8:50	24.5	35.8	7.00	105.9	8.19	0.43	0.41	0.49	0	1	0	
Kapalua Bay RFS230817	N	9:15	26.5	34.0	6.30	94.3	8.08	0.66	0.72	1.18	0.95	1	3	0
Ka'opala Bay RKO230817	N	9:45	27.1	35.5	6.29	95.7	8.13	2.82	2.74	2.70	0	0	0	
Kahana Village RKV230817	N	10:06	27.7	35.0	6.43	98.7	8.14	2.83	2.56	2.87	0	0	0	

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

HNL - calm & clear
RON - sunny, breezy, small waves
DO second reading 105.890 6.97 mg/L
RFS - sunny, light breeze, calm ocean, almost deserted! 4th Turbidity reading = 0.72
RKO - sunny, light breeze, calm ocean
wrote turbidities in wrong spot C first.
RKV - sunny, breezy, calm

TURBIDITY VERIFICATION & PROBE TEMPERATURES

	Blank (must be < 0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Turbidity Standard	0.05	6.54	58.4	605
Field - Pre-sample	0.05	6.54	58.9	605
Lab - Post sample	0.06	6.52	59.0	605
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Verify Probe Temps	25.4	25.6	25.5	-

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	5	LYL	M.Beeson

Signature (Team Lead):

mBeeson

Printed Name:

Meredith Beeson

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L. Itchemann, C. Beeson, M.			
Session	126					
Date	08/17/2023					

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL230817-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	
RON230817-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS230817-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	
RKO230817-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	
RKV230817-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:06	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):

Mrs

Printed Name:

Meredith Beeson