

FIELD EQUIPMENT VERIFICATION (PRE/POST A WEEKLY SAMPLING)

Session No:	Verifiers (pre-sampling):				Pre Date:	Pre Time:	Verifiers (post-sampling):				Post Date:	Post Time:
WM127, LN4, LFR3	M. Sharpe, L. Yannell				9/11/23	10:00 AM	L. Yannell, M. Sharpe				9/14/2023	12:00
	"				"	"	M. Sharpe, Y. St-Louis				9/12/2023	1015
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		
	2	7	6/28/24		28.3		31.4					
	2	8	6/28/24			27.6		29.2				
Salinity			3 months	Std Val	Tap water	Salin Std 8/7/23 date	Tap water	Salin Std 9/11/23 date	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle		
	3	7	8/07/23		0.18	33.4	0.18	34.0				
	4	8	8/07/23		0.18	34.2	0.18	33.3				
Dissolved Oxygen	3 ₄		1 year	Std Val	100%		100%		± 5 %	verified 3x (98.4%, 97.7%) verified 2x (102.3%)		
	3	3	7/17/23		98.2		99.6					
	4	4	7/17/23		101.3		102.1					
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		
	3	5	8/10/23	7/11/23	7.00	10.01	7.00	10.01				
	4	6	8/10/23	9/11/23	7.00	10.01	7.00	10.01				
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		
	5	n/a	7/20/23		0.05	6.41	0.06	6.59				
	2	n/a	7/20/23		0.05	6.38	0.04	6.31				

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

NMS - lab

Team	R2RS	Samplers (Last Name, 1st Initial)	FLOYD, M BIESER, S	Meters and Probes ID		
Session	127			HQ2200: SM 3	2100Q: SM 5	
Date	09/12/2023			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		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 RNS230912	N	8:10	25.9	34.6	6.52	96.8	8.06	1.63	1.79	1.57 ²⁸ 2.56 ²⁸	0	0	0
Pohaku RPO230912	N	8:36	26.3	34.6	6.27	93.7	8.13	0.85	0.99	0.96 ²⁸ 1.12 ²⁸	0	0	0
Kaanapali Shores RKS230912	N	8:54	26.2	35.5	6.25	94.1	8.05	1.73	1.93	1.94 ²⁸ 2.35 ²⁸	0	1	0
Kahekili Beach Two RKT230912	N	9:17	26.5	35.9	6.27	94.8	8.13	0.68 ²⁸ 1.12	0.71	0.69	2	0	0
Canoe Beach RCB230912	N	9:40	27.3	35.0	6.87	104.6	8.18	2.82	2.58	2.28	0	0	0
Wahikuli RWA230912	N	9:56	27.2	34.8	6.62	100.5	8.17	1.02	1.04	1.10	0	0	0

Turbidity Spare Standard Blank = 0.06 NTU

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

RNS: Flat, 0-1' shorebreak, slight trade winds
RPO: NOTE Low DO%, <1' shorebreak.
RKS: Flat - 0-1' swell, 1 guy Fishing on beach
RKT: small swells, 1/2 ft.
RCB: 1-2' swells, shorebreak. Note high DO%
RWA: 1-2' Shorebreak

RNS, RPO, RKS, & RKT: 4th turbidity taken

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	0.08	6.66	58.8	604
Lab - Post sample	0.07	6.53	58.6	604
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Verify Probe Temps	25.9	26.0	26.0	

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	6	NMS	Liz Yannel

Signature (Team Lead):

Liz Yannel

Printed Name:

Liz Yannel

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

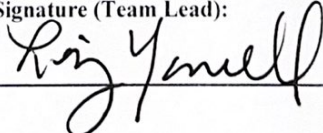
Last updated April 2023

Hāi O Ka Wai Ola - Sample Collection Datasheet

Team	R2RS	Samplers (Last Name, 1st Initial)	Floyd, M. Bieser, S.
Session	127		
Date	09/12/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS230912-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	
RPO230912-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS230912-N-1	Kaanapali Shores	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT230912-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:17	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB230912-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA230912-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:56	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)	SHARPE, M GLUND, K GLUND, M	Meters and Probes ID		
Session	127			HQ2200: SM 3		2100Q: SM 5
Date	09/13/2023			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		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L) 5.2-7.0 normal	(%) 85-105 normal					water	beach	camp
Camp Olowalu OCO230705 230913	N	9:08	26.8	35.8	6.48	98.5	8.06	3.42	3.16	3.58	0	0	0
Mile Marker 14 OMM230705 230913	N	9:32	27.0	35.9	6.19	94.4	8.04	1.93	1.99	2.05	0	2	1
Ukumehame OUB230705 230913	N	9:52	26.9	36.1	6.69	101.8	8.12	8.96	9.78	9.59 10.2	6	0	0
Papalaia Pali OPP230705 230913	N	10:12	26.6	36.0	6.67	101.1	8.14	2.14 2.21	2.41	2.09	10	0	0

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

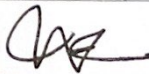
OCO: calm water, sunny, light breeze, no peo.

OMM: calm water, overcast, light breeze

OUB: light sprinkle rain just starting, calm H₂O
(stopped in 5 min)
small swell w/ 1' waves incoming, overcast
small bits burned debris @ shoreline
4th TURB 9.59

OPP: overcast, surfers in H₂O, small waves 2' with
small shorebreak @ collection 4th TURB 2.14

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	0.06	6.60	58.8	604
Lab - Post Sample	0.07	6.53	58.6	603
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Verify Probe Temps	26.6	26.8	26.7	
CHAIN OF CUSTODY	# of Samples	Relinquish to	Contact	
Nutrients				
Signature (Team Lead):			Print:	Sharpe


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

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Polanui	Samplers (Last Name, 1st Initial)	Sharpe, M Gund, K Gund, M
Session	127		
Date	09/13/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
OCO230913-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OMM230913-N-1	Mile Marker 14	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:32	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUB230913-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:52	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP230913-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:12	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		

Signature:  Print: Sharpe

Team	R2RN	Samplers (Last Name, 1st Initial)	Cici Hehamann, Lisa Berg		Meters and Probes ID		
Session	127				HQ2200: SM 3	2100Q: SM 5	
Date	09/14/2023				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		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L) 5.2-7.0 normal	(%) 85-105 normal					water	beach	camp
Honolua Bay RHL230914	N	8:00 am	25.7	34.7	5.88 5.7	87.3	8.05	4.44 4.78	3.65	3.97	0	4	0
Oneloa Bay RON230914	N	8:45	26.6	35.8	6.64	101.2	8.13	1.01	1.40	1.07	4	1	0
Kapalua Bay RFS230914	N	9:10	26.6	35.5	6.34	96.1	8.06	1.01	0.96	1.02	0	1	0
Ka'opala Bay RKO230914	N	9:34	26.7	35.4	6.24	94.6	8.09	3.67	3.70	3.80	2	0	0
Kahana Village RKV230914	N	9:55	27.0	35.3	5.37	81.7	8.05	6.24	6.24	6.58	0	0	0

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

RHL - Calm, No Wind, glassy, clear, no river runoff
4th Turbidity taken
RFS - Super quiet, Calm
RON - Small Surf, Light Breeze, Clear
RKO - Calm, Semi clear visibility
RKV - Clear, Calm; 4th turbidity taken

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	0.06	6.59	58.3	604
Lab - Post sample	0.07	6.48	58.9	605
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Verify Probe Temps	25.7	25.5	25.6	

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	5	NMS	Liz Yarnall

Signature (Team Lead):

Liz Yarnall

Printed Name:

Liz Yarnall

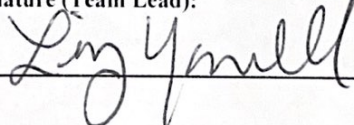
Sites with potential for freshwater flow: Honolua, Kahana Village

Last updated August 2021

Team	R2RN	Samplers (Last Name, 1st Initial)	Hehemann, C. Berg, L.
Session	127		
Date	09/14/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL230914-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	
RON230914-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	
RFS230914-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO230914-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV230914-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:55	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