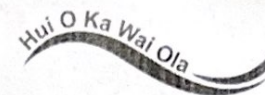


FIELD EQUIPMENT VERIFICATION (PRE/POST A WEEKLY SAMPLING):



Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
WM124 LN 2	L. Yannell, Y. St-Louis	7/3/23	9:34 AM	L. Yannell, Y. St-Louis	07/07/2023	1315

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	
					32.3 °C	32.3 °C	30.0 °C	30.0 °C			
	5	6	3/4/2025		32.3		29.8				
	5	5	3/14/2025			32.2					
Salinity			3 months	Std Val	Tap water	Salin Std 6/12/23 date 33.7 ppt	Tap water	Salin Std 6/12/23 date 33.7 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	4	6	6/12/23		0.17	34.4	0.16	34.5			
	3	5	5/22/23		0.18	34.1					
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	4	4	8/15/22		99.9		99.8				
	3	1	2/6/23		98.8						
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	7/13/23		7.00	10.01	7.05	10.06		New pH solutions for post-verific. pH 7 Exp: June 2024 May 2024 pH 10 Exp: May 2024 June 2024 JY	
	3	9	7/3/23		7.00	10.01					
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 NTU	BLANK <0.1	LOW 1-10 5.96 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	4	n/a	7/3/23		0.07	5.96	0.08	5.95		Calibrated today: passed Med = 62.9 High = 641 Med = 57.9 High = 636	
	1	n/a	7/3/23		0.06	5.42					

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

OLP Lab

Team	R2RS	Samplers (Last Name, 1st Initial)	S. Bieser, T. Friberg, M. Floyd		Meters and Probes ID		
Session	124				HQ2200: 4	2100Q: 4	
Date	07/04/2023				pH: 8	DO: 4	Salinity: 6

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 RNS230704	N	8:04	25.7	34.4	6.38	94.6	8.11	0.77	0.82	0.75	3	3	0
Pohaku RPO230704	N	8:26	26.1	33.8	6.15	91.9	8.16	0.72 28 0.59	0.70	0.71	7	1	0
Kaanapali Shores RKS230704	N	8:45	25.8	35.5	6.62	98.5	8.11	1.36 2.68	1.52	2.08	3	16	0
Kahekili Beach Two RKT230704	N	9:04	26.8	36.0	6.28	95.0	8.16	0.57	0.63	0.57	1	3	0
Canoe Beach RCB230704	N	9:26	27.5	35.3	6.71	102.6	8.21	2.63	3.04	2.92	2	6	0
Wahikuli RWA230704	N	9:40	27.2	35.0	6.50	99.1	8.21	0.86	0.71	0.67	2	0	0

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

No strd sampling was done or not written down.
RNS- very calm swells. CALM breeze.
RPO- 4th turb = 0.72
RKS- CALM waters, NO swell
4th turbidity 1.36
RKT- minimal swells, Trade winds getting strong
RCB- CALM, LIGHT TRADES.
RWA- .05' shorebreak
*KING TIDE EA
* Distilled water bottle not pouring
consistent

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	5.96	62.9	641
Pre-sampling	0.08	5.99	62.6	641
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Temperature Verification	25.7	25.7	25.6	
Post-sampling (Lab)	0.08	5.90	62.9	639

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	6	OLP	Liz Yannell

Signature (Team Lead):

Printed Name:

Liz Yannell
Liz Yannell

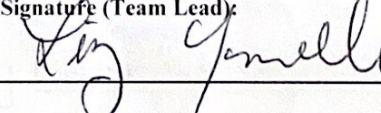
Sites with potential for freshwater flow: 505 Front st, Ukumehame

Last updated April 2023

Team	R2RS	Samplers (Last Name, 1st Initial)	S. Bieser, T. Friedberg, M. Floyd
Session	124		
Date	07/04/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS230704-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:04	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO230704-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS230704-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT230704-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:04	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB230704-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:26	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA230704-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:40	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)	GUND, K HARRIS, K	(Vol FORNOT TO LIST ef)	Meters and Probes ID		
Session	124				HQ2200: 4	2100Q: 4	
Date	07/05/2023				pH: 8	DO: 4	Salinity: 6

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
505 Front St PFF230705	Y	8:10	26.7	35.4	5.51	83.3	8.07	5.26 KH 5.78	4.51	4.84	3	2	0
Lindsey Hale PLH230705	N	8:36	27.2 35.3 KH	35.3	5.11	77.9	8.08	4.89	5.06	4.58	0	1	0
Lahaina Town PLT230705	N	8:55	27.3	34.9	5.85 8.87 KH	89.4 8.74 KH	8.43 KH 7.77 KH 8.10	8.87	8.74	9.43 7.77 KH	0	0	0
Camp Olowalu OCO230705	N	9:32	27.3	36.1	6.43	98.3	8.13	2.60	2.49	2.39 KH 2.30	0	2	0
Mile Marker 14 OMM230705	N	9:53	26.8	36.0	6.40	91.0	8.08	1.39	1.54	1.24 1.19	1	4	0
Ukumehame OUB230705	N	10:08	28.0	36.3	6.70 2 KH	104.0	8.17	4.89	4.94	5.24	0	0	0
Papalaua Pali OPP230705	N	10:24	27.7	36.1	6.78	104.3	8.18	3.48	3.22	3.35	0	0	0

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

PFF super calm 4th turbidity 5.78
PLH dirty water directing in front of the
drainage pipe. No water flowing
now
PLT thick silty bottom so we waited and
avoided the cloud. So sorry about
putting turbidity in wrong place ef
OUB calmer than we've seen
OPP windy + misty *KING TIDE ef
OMM-4th TURBIDITY-1.19 ef

* good job labeling + wrapping probes ef
* NO COMMENTS ON OMM + OUB (?) ef
Sites with potential for freshwater flow: 505 Front st. Ukumehame ef

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	5.96	62.9	641
Pre-sampling	0.07	5.93	62.6	640
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Temperature Verification	26.7	26.7	26.6	
Post-sampling (Lab)	0.07	5.93	62.8	641
CHAIN OF CUSTODY INFORMATION	# of Samples	Relinquish to	Contact	
Nutrients	7	OLP	EMILY JOHNSON	
Signature (Team Lead):	Emily Johnson	Print:	EMILY JOHNSON	

* NO TRASH BAG
FROM TUESDAY PREP ef

* SALINITY HIGH ef
Last updated April 2023

Team	Polanui	Samplers (Last Name, 1st Initial)	GUND, K HARRIS, K
Session	124		
Date	07/05/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF230614-N-1 230705-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	
PLH230705-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	
PLT230705-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	
OCO230705-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:32	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OMM230705-N-1	Mile Marker 14	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUB230705-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP230705-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:24	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: *Emily Johnson* Print: EMILY JOHNSON
Last updated April 2023

Team RZRN	Samplers (Last Name, 1st Initial) Berg, L Hehenan, C Hurley, C	Meters and Probes ID		
Session 124		HQ2200: 4	2100Q: 4	
Date 07/06/2023		pH: 8	DO: 4	Salinity: 6

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 RHL230706	N	7:54	25.1	34.4	6.32	92.9	8.14	2.86	3.10	2.81	8	14	0
Oneloa Bay RON230706	11	8:34	26.1	36.1	6.81	101.9	8.20	.55	.80	1.08 .774	0	2	0
Kapalua Bay RFS230706	N	9:00	26.3	34.7	6.19	93.1	8.09	1.34	1.34	1.52	30 ^{cat}	30 ^{cat}	0
Ka'opala Bay RKO230706	N	9:29	26.8 25.7	35.9	5.93	89.5	8.16	3.17	3.09	3.05	2	2	0
Kahana Village RKV230706	N	9:44	26.7	35.3	5.81	87.6	8.11	4.32	4.15 5.96	4.08	9	11	0

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

RHL - Rain this am. not currently
Calm, NO surf yes during sample

RON Some waves beach empty, drizzle
Ath Turbidity Reading 1.0816 very low

RFS 30p in water 30p on beach *LOW
low tide small waves light breeze TIDE ga

RKO 4p beach + water fairly clear

RKV - still bridge under construction, Light breeze, No waves, low tide

Ath turbidity 5.96 ga

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	5.96	62.9	641
Pre-sampling	0.09	5.96	62.4	640
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Temperature Verification	25.2	25.1	25.0	
Post-sampling (Lab)	0.06	5.93	63.0	640

CHAIN OF CUSTODY INFORMATION

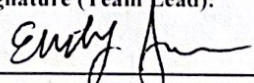
	# of samples	Relinquished to	Contact
Nutrients	5	OLP	Emily Johnson
Signature (Team Lead):		Printed Name:	
Emily Johnson		EMILY JOHNSON	

Sites with potential for freshwater flow: All

Team	R2RN	Samplers (Last Name, 1st Initial)	BERG, L HEHEMANN, C HURLEY, C
Session	124		
Date	07/06/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL230706-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON230706-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS230706-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO230706-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:29	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV230706-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:44	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: EMILY JOHNSON
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